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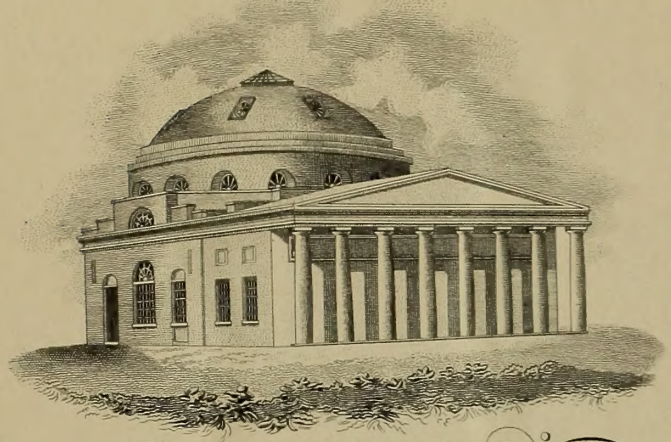

University of Maryland

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University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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* Partially faded. Where text is on both sides, ink bleeds. Text lost in margins.

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UNIVERSITY OF MARYLAND

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An

Inaugural Dissertation

on

Medical Electricity & Galvanism

Submitted to the examination of the Rt Revd Jas Kemp, D.D. Provost

and the

Trustees & Faculty of Physic

of the

University of Maryland

for the Degree of

Doctor of Medicine

By

Thomas Heslip

of

Baltimore.

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18861

To

Dr Richard W. Hall.

Professor of Obstetricks &c &c

in the

University of Maryland

this essay

is

Respectfully dedicated

By

The Author

March 20th 1819

To

Medical Electricity and Galvanism.

It is natural to suppose, that an agent so powerful, mysterious and penetrating as Electricity, would be early applied to medical purposes. Accordingly, about the middle of last century and soon after the discovery of the Electric shock, it began to attract the attention of Physicians, who applied it to the cure of various diseases, with different degrees of success. After a great many vicissitudes of reputation, being by some extolled as a universal Panacea, and by others considered inert or injurious; it has at last assumed it's proper rank, in the Materia Medica and it's virtues seem now to be pretty well established. It is however not yet brought into general practice.

The inconvinience of removing an Electrifying-machine or Galvanic-battery from place to place, has always been a great obstacle to the employment of this remedy: but this objection does not so much apply to the Electrophorus, which is perhaps, sufficiently powerful, for the generality of cases, as the spark is more used now than formerly.

Medical Electricity
and
Galvanism.

It is natural to suppose, that an agent so powerful, mysterious and penetrating as Electricity, would be early applied to medical purposes. Accordingly, about the middle of last century and soon after the discovery of the Electric shock, it began to attract the attention of Physicians, who applied it to the cure of various diseases, with different degrees of success. After a great many vicissitudes of reputation, being by some celebrated as a universal Panacea, and by others considered inert or injurious; it has at last assumed its proper rank, in the Materia Medica and its virtues seem now to be pretty well established. It is however not yet brought into general practice.

The inconvenience of removing an Electrifying Machine or Galvanic battery from place to place, has also been a great obstacle to the employment of this remedy. But this objection does not so much apply to the Electric Portable, which is perhaps, sufficiently powerful for the [illegible] of cases, as the Shock is more used now than formerly.

This machine is so simple in its construction, that it would require but little ingenuity, to make one in a few minutes, as the materials can be procured in almost any place. It consists merely of a resinous cake (composed of equal parts of rosin & bees wax) from five to seven inches diameter; and a metalic plate of the same size, with a glass handle in the centre. To put the Electrophorus into operation, the resinous cake must be rubbed briskly with a piece of dry flannel, or fur: the metalic plate is then to be set upon it, and touched with the finger, which will receive a spark: lastly, the metalic plate, being held by the extremity of the glass handle, is to be seperated from the electric or resinous cake, and elevated above it: the metalic plate, will be found strongly electrified, with an electricity contrary to the plate beneath; and will give a strong spark to any conductor that is brought near it. By setting the metalic plate on the resinous one again, touching it with the finger, and seperating it successively, a great number of sparks may be obtained, apparently of the same strength, and that, without exciting the electric cake anew. If these sparks be repeatedly given, to the knob of a

Leyden phial: this will presently become charged: thus
y means of the Electrophorus, a shock may be given.

Electricity and Galvanism resemble each other so
much in their general properties and effects, that they have
een considered as ultimately the same power: or the same
ubtle matter, in different states. The action of Galvanism
owever, is more extended, both to the nervous & muscular
ystems, than that of Electricity, which is more local in
's action. The excitation of the former, produces sensations
nd contractions in parts, which are insensible to electrical
mpressions: and the muscular contractions produced by
alvanism, are more than proportioned to it's power of
roducing electrical phenomona: this is supposed to be owing
ng to a difference of intensity in the fluid, produced by the
node of obtaining it.

Modus Operandi

The medicinal operation of electricity, may be refered to
's stimulent power, and should therefore be used only in
he asthenic form of disease, or when there are no symptoms
f inflamation present. It produces forcible contractions of
he irritable fibre: excites therefore to action, when duly applied
nd when in excess, immediately exhausts the irritability of
he system. It possesses the important advantage of being
easily

asily brought to act locally, on any viscus in the body, and
l being confined to that part, to which it is applied: whilst
an also be employed in any degree of force. It has been found
invariably to quicken the circulation, increase the insensi-
ble perspiration and to promote the glandular secret-
ions. All this it performs, merely by the rapidity
with which the fluid passes through the parts to which
t is applied: and not by any specific stimulating quality
inherent in, and peculiar to Electricity, which it imparts to
he nerves, muscles &c: for we know that the smallest shock
will pass through an infinite number of persons, without
he least diminution in force or effect. Moreover, a person
when insulated may be charged with Electricity to the hig-
hest degree, without being sensible of it, so long as the
luid remains at rest: but if it be put in motion, by being
rawn off with points or knobs: the part to which they are
pplied, becomes immediately sensible to it's action. Again
Negative Electricity is only the absence of positive Electricity:
ow: if a person standing on the insulated stool, becomes
egatively electrified, that is, has the natural quantity of his
ody, drawn off artificially: he feels no weakness or debility,
rom the loss of an accustomed stimulus, but on the contrary,
he parts through which the fluid passed, are as much sti-
mulated, as if he had received the same quantity in excess

herefore, not only the presence, but the action of Electricity, is
ecessary to produce a stimulating effect—

The Electrical Fluid is applied in three different forms,
o wit: the stream, the spark and the shock. First, the aura
r continued stream, is drawn by connecting a wooden po-
nt, or metalic wire, to the prime conductor of an electrify-
ng-machine, and holding it by a glass handle, one or two
nches from the part to be operated upon. This is the mildest
orm in which it can be applied, and is used in debilitated
abits, nervous Females, and pregnant women: the stream
s also used where the surface is abraded: to indolent ulcers:
nd wherever the spark causes too much irritation.

The spark is drawn by placing the patient, on an insula-
ed stool, connected with the prime conductor, and while
he machine is in motion, bringing a metalic knob, with-
n a short distance of the part, from which the spark is
o be taken. A pungent sensation is excited, and slight con-
ractions may be produced, if the machine be sufficiently
owerful. The spark is used more frequently than either
he stream or shock; as it possesses in some degree the
irtues of both. The shock is given by discharging the
eyden phial, making that part of the body, through which
t is intended to be transmitted, a part of the circuit. The
ensation it excites is unpleasant and the contractions

considerable.

This form is thought by some to be too violent: and the shock should therefore be given very slight at first.

Galvanism is applied by connecting a wire to each end of the battery, and bringing them in contact with the part affected. so that it shall form a part of the circuit of the Galvanic discharge: the one wire is kept in contact with the part it touches. the other is alternately applied and removed. The skin should be moistened, or a piece of tinfoil laid on the surface. It is necessary to have the wires passed through small glass tubes. to prevent the operator from being affected by the shock.

To affect the general system speedily, the fluid should be passed through some vital organ as the brain, heart &c: it may however be affected secondarily. by applying the fluid. for a considerable time. to parts less sensible by nervous sympathy.

A general rule for the employment of Electricity, is, to commence with the mildest form: and gradually raise it if necessary. to the more powerful. The patient may remain under the influence of the electric aura. five or ten minutes 3 or 4 times a day, or if sparks are drawn they should not exceed 12 or 15 in number. Ten or a dozen shocks. will generally be found sufficient at a time. those may be repeated daily.

I shall now proceed to mention some of the diseases, in which Electricity has been found most successful, but without citing cases; as that would be unnecessary, and perhaps improper in an essay of this kind. It must be here premised, that the general system, should be attended to in all cases, in conjunction with the local means: Unfortunately this, as well as most other powerful remedies, have been considered specifics: and have consequently lost much of their beneficial effects by being administered as such: without a due regard to constitutional symptoms.

Paralysis was one of the first diseases, to which electricity was applied, but not at first with much success. This perhaps arose, from its indiscriminate use in all stages of the disease. Dr Franklin, after having used it with some relief at no permanent benefit to his patients, remarks, that perhaps, some permanent advantage, might have been derived from it, if the Electrical shocks, had been accompanied, with proper medicine and regimen, under the direction of a skilful Physician: The acute mind of Franklin, soon perceived, that the empirical use of this remedy, would be worse than useless.

Deafness, loss of speech and blindness, are said to have been cured by electricity: they must have depended upon a local or partial paralysis of particular nerves:

or Electricity, can only cure functional disease, it cannot re-
move structural derangement.

Tooth-ache occasioned by cold, rheumatism &c is gene-
ally relieved by drawing the fluid, with a point, immedi-
tely from the part & also externally from the face; but when
he tooth is much decayed, it sometimes increases the pain
a prodigious degree. Rheumatism even of long standing
relieved by drawing sparks through flannel, from the
arts, for four or five minutes daily. In the same manner
wellings & indurations, which do not contain matter are
educed. Old ulcers generally put on a healing
isposition, under the influence of the Electrical aura.
hrophalous tumours, in the incipient state, are often rem-
ved by drawing the fluid in a stream, from the part; in this
ease we must pay particular attention to the system
iving tonics &c. Inflamation of the eyes is often ben-
fitted by throwing the fluid from a point to the eye while
ren, this should not be continued for more than half a
minute at a time, for fear of irritation, but it may be rep-
ated four or five times a day.

Tetanus has been cured by passing shocks through
he parts affected - Chorea Sancte viti, has also yielded
electricity.

Nervous headaches, of long duration, are generally
elieved, by throwing the fluid from a metalic or
wooden

ooden point. to different parts round the head successive-
. Chlorosis. Amenorrhea &c. when they arise from deb
ity of the Uterus or general system, are often successfully
nd speedily cured, by means of Electricity, even when of
ng continuance, and after other powerful remedies have
iled. we should begin with the mildest form and pro-
ed as the patient can bear it. to the more powerful; they
ay be applied three or four minutes every day, using other
medies in the mean time

Dr Jacob Hall was the first who used Electricity
obstructions of the billiary ducts. Dr Darwen after him
commended it highly; and it has since been used with
e most signal success, in many cases of billiary calculi.

The professor of Obstetricks in the University of Mary-
and, has found it very beneficial in various cases of
oriases; Impetigo. Porrigo &c. in the form of sparks, repeated
o or three times a week; he has also made use of slight
hocks or strong sparks in the jaundice of pregnant women
ith the most favourable results, but great caution is required
their administration.

Wilson Philip recommends Galvanism very highly in
s work on Asthma and indigestion; and several cases
diseased spine, have been cured by it under the direction

f M. Earle in St Bartholomew's Hospital. Sir Astley
Cooper says that electricity is very useful in nervous de-
-ility. M. Jocndret of Paris, some years ago, made sev-
-ral experiments to determine how far Galvanism might
effectual as a remedy in concussion of the brain, he
succeeded in resuscitating two rabbits that were appare-
-ntly dead, from this cause-

The experiments of Magendie, Pouillet and Roulin, cor-
respond with those of Jocndret: they reanimated an animal
which had been under water a quarter of an hour, and
which had exhibited no signs of life. From those results
it may be inferred, that Galvanism would be of service
in long continued Asphyxia and in certain cases of Hys-
teria

Electricity and Galvanism have of late, attrac-
ted the serious attention of many eminent Medical &
Philosophers and I would not be surprised to find in the
course of a few years, the principles & practice of this
science taught in our Universities, as a regular branch
of Medical Education

A

Dissertation on

Chorea Sancti Viti.

Submitted to the examination

of the

Right Reverend Bishop Kemp

Provost,

and the Regents and Professors of the

University of Maryland,

for the degree of

Doctor of Medicine.

By William H. Pattillo

of Virginia.

March 1817.

Chorea Sancti Viti.

This singular disease has derived its name from the dancing and odd gesticulations of certain young females who paid an annual visit to the chapel of Saint Vitus near Ulm, for the purpose of performing some religious ceremony. As soon as this anniversary was approaching, they were seized with convulsive motions in the arms and legs, and an irresistable desire of dancing. This desire they gratified by resorting with one consent, to the chapel of St. Vitus, where they remained several day, dancing like persons deranged. When the spell was at last dissolved they returned home, and continued free from such symptoms till the next year. As this disposition never occurred more than once a year, and that at a stated period, it appears to have been in a great measure voluntary, or to have spread by the spirit of imitation so common to all animated beings. The name has since been applied to a disease in some cases formidable, and under every form peculiarly distressing.

Chorea has occupied so little of the attention of authors that they have scarcely thought it worth describing: and even Cullen, who is remarkable for a minuteness in detail and faithfulness in description which have been seldom surpassed, has only allotted it a place, in his "First lines," of one or two pages.

A late writer on this subject says "This disease has been so unwarily passed over by authors, that little is to be gained, even of the facts connected with its history: and Sydenham, who has perhaps given the best description of it, scarcely adverts to any thing but its curious gesticulations."

Notwithstanding this indifference on the part of those to whom we

we are to look for information. we frequently find it resist the efforts of the physician. and render the patient an object of misery through life.

Chorea is placed by Dr Cullen under the Class "Neuroses," and Order "Spasmi". and is defined in his Synopsis in the following words. "Impuberes utriusque sexus. ut plurimum intra decimum et decimum quartum aetatis annum adorientes. motus convulsivi ex parte voluntarii, plerumque alterius lateris, in brachiorum et manuum motu, histrionum gesticulationes referentes: in gressu pedem alterum saepius trahentes quam attollentes."

"In priore hujus libri editione" adds the Doctor. "Choream pro convulsionis specie habui, cum autem ratione tum aetatis quam adoritur, tum motuum quos exhibet, a quavis alia convulsionis specie differat. hic pro genere diverso posui."

The Professor of Anatomy in this University, in his "Nosologia Methodica", has made Chorea a distinct order in the Class "Neuroses". and has given nearly the same definition with Cullen.

There are various opinions with respect to the nature and seat of this disease. By some it has been supposed to consist of a relaxed state of the muscles, which, being unable to perform their proper function of moving the limbs, shake them with convulsive motions. Some have described it as affecting the nerves and brain; others have supposed it paralytick, and Cullen evidently thought it spasmodick. By some also it has been referred to the imaginary power of witchcraft.

It differs from a spasm in the duration of the contractions. A

A spasm is a violent and long continued contraction of a muscle occasioning great pain and an inability of moving the limb, and succeeded by a complete relaxation. The contractions of the muscles in Chorea are too transient and not attended with sufficient pain to entitle them to the appellation of spasms. They are in a short time followed by a relaxation, and the limb is suddenly and forcibly drawn in some other direction by the action of some other muscle.

Dr Potter
The Professor of Practice in his lectures on this disease describes it as partly paralytick and partly convulsive. He has therefore termed it a paralytick convulsion.

It occurs in both sexes, and is for the most part confined to one side, affecting principally the arms and legs. Cases have been related where the affection was extended to the muscles of the neck and body; and Cullen says that persons in Chorea sometimes perform various feats of running and leaping. It is more frequently met with in females, on account of their constitutions being more delicate, their habits and modes of life being different, and being more predisposed to nervous diseases.

Young persons of both sexes are rendered more liable to this operation of its exciting causes, when with a natural delicacy of constitution are combined certain circumstances tending to impair the health and vigour of the system, as long confinement, the use of scanty and improper nourishment, constant employment at a sedentary occupation &c.

It attacks principally young persons, and often disappears before a

or about the age of puberty.

While under the influence of the disease, the limbs affected is so much convulsed that the foot ~~can~~ cannot be directed to any particular point without many unsuccessful attempts. If the hand be placed upon the breast it is quickly and involuntarily drawn away; and when the patient attempts to drink, the cup is carried many times from side to side before he can reach his lips. When he has fortunately carried it to his mouth, he seizes the first key moment to throw the liquid down his throat, which he does in a convulsed manner, apparently for the amusement of the spectators. Deglutition is sometimes difficult, and articulation impeded or suspended.

These motions have very little connection with the will, and the patient, finding it difficult to overcome them, yields at last without resistance. "The mind," according to Dr Cullen, "is affected with some degree of patuity, and often shows the same varied, desultory, and capricious motions which occur in hysteria."

The diagnostics of Chorea are in general so strongly marked that it is easily distinguished from other diseases. It resembles Epilepsy in the convulsive motions of the limbs. It differs from it in being seldom or never attended by sudden vertigo, and foaming at the mouth, two symptoms so characteristick of Epilepsy. There is also a difference in the seat of the two diseases. That of Epilepsy is manifestly in the brain, while Chorea is first a disease of the nervous system. Epilepsy is very frequently hereditary, and is always a dangerous disease; while the prognosis in Chorea is favourable, it

& never proving dangerous except when there are symptoms of its producing some other disease. It is sometimes followed by Epilepsy. by effusion in the brain, by Mania, and even by Apoplexy.
I do not suppose that Chorea is ever changed into a different disease, for it is governed by laws peculiar to itself; but by the long continuance of it, and frequent repetition of its effects, such a state is induced, whether in the general system or a particular part, that certain exciting causes call into action some other disease. It is remarked by some that choreatick patients frequently die in an apoplectick fit. In this case, the energy of the brain and nerves is so far destroyed that an exciting cause produces a sudden effusion of blood in the brain.
It may frequently be mistaken for hysterics at first sight, for it occurs just about the period at which females are subject to the latter affection, and is attended by several of the symptoms of that nervous disease. It may be distinguished by desiring the patient to walk, when the foot is dragged in a ridiculous manner, as if partly paralytick. If the lower extremities be not affected, the diagnostick will be very readily pointed out when the patient attempts to dance.
According to Professor Potter, Chorea depends on a primary mobility of the nervous system, and corresponding inability in the muscles. Sydenham supposed it to be produced by an acrid fluid thrown out upon the nerves. By some it is said to arise from hereditary predisposition. Among the exciting causes are enumerated various irritations, as teething, worms, acrid matter in the bowels, offensive smells, poisons, violent affections of the mind, as horror &c; and in many cases it is referred to general weakness. This is [illegible] explanation of cause

It will not be amiss in this place to take notice of some cases which have been mentioned by authors. In a case of a female who came under the charge of Dr Monro, he found, on examining her mouth, that she was cutting one of the molar teeth of the affected side. Thinking this to be the immediate cause of irritation, he made an incision into the gum, and the choreatick symptoms disappeared. In a short time the symptoms appeared on the opposite side, and the Dr found a second tooth pushing through the gum. By a "deep crucial incision" he gave free passage to the tooth, and cured the disease a second time.

Dr Gregory had a case of nearly the same nature. This was in a boy whose old teeth obstructed the passage of a new set just coming out. By removing the old set he successively cured the disease on each side. "The symptoms afterwards returned, and no further cause of irritation being discovered in the mouth, he was cured by the usual tonick remedies." These cases both prove the existence of great irritability in the system, and a predisposition to Chorea which was easily excited.

Another of the causes of Chorea is fright. A very interesting case took place in the practice of Professor Davidge. Some children were amusing themselves in punishing a cat which they had confined in a room. The poor animal, after being tormented, and finding no possibility of escaping, flew furiously at one of the children, and bit him on the arm & leg. Here their sport ended. In a few days the child was seized with convulsions, and the disease was mistaken for hydrophobia. They were undeceived by presenting him with a cup of water, which he with much difficulty carried to his lips, when in the peculiar choreatick manner, he convulsively threw the fluid down his throat. He was

he was cured after some weeks, by the cold bath and general tonick treatment. This case is the more interesting to us, as the child had been given over to the ravages of a disease supposed to be necessarily mortal.

In examining the causes of Chorea. Professor Potter says "I believe that poverty draws in its haggard train many fruitful causes of this disease. Hence we see it so frequently among the manufacturing poor of England and in Germany it is more common perhaps than in any other part of the world."

Lastly, a propensity to imitation has been thought a frequent cause of Chorea. This is probably the cause when it spreads over a certain tract of country, as when it appeared epidemick in Scotland, and I have already had occasion to hint that this was also the case with the convulsive young women of Ulm. From the same cause it has been frequently met with among certain religious enthusiasts in different parts of the United States.

A new theory of Chorea, from the pen of Dr Coxe of Philadelphia, is recorded in the Medical Repository of New York. Hexade 2d. Vol 2d.

In this paper Dr Coxe brings forward many cases and arguments to prove that Chorea is always a symptomatick disease, depending on a chronick state of Hydrocephalus. "Some, says the writer, have considered it of the epileptick kind: some of the paralytick, and some of both. It has been viewed as a disease of the muscles, considered as a branch of the nervous system. It has been regarded as similar to the disease produced by the bite of a tarantula, and it has also been ascribed to witchcraft."

"I shall endeavour, adds the Dr, to develope the pathology of the disease,

disease by proving that it arises solely as a symptom of the chron
ic state of hydrocephalus internus."

"Hydrocephalus internus" according to Dr Cox, sometimes follows inflam
matory fever when the head was affected; so does Chorea and both
sometimes occur from blows on the head."

In this paragraph Dr Cox approaches nearer to the pathology of hydro
cephalus internus than to that of Chorea. That convulsions sometimes at
tend an effusion of fluid in the brain appears evident from several cases
stated by Dr Cox. That hydrocephalus internus sometimes follows inflam
matory fevers when the head had been affected; and that it may occur
from blows on the head is plain enough. But this does not go to
prove the correctness of Dr Cox's opinion. On the one hand it proves that
hydrocephalus internus is only the consequence of an inflammatory
action of the brain, which is followed by a secretion of fluid in the
ventricles. On the other hand it shows that this secretion in the brain
may so influence the general nervous system, or a part of it, as in
some instances to produce convulsions. But these convulsions are very
different from those which appear in Chorea, and are generally the
immediate forerunners of death.

In a case reported by Dr Cox which terminated fatally, he gives the
following opinion concerning the immediate cause of death. "The
water on the brain was not I believe the immediate cause of death, some
sudden effusion or congestion was the source of the fatal issue, by pro
ducing apoplexy."

On dissection he found the ventricles distended with fluid, and the
delicate vessels, which only admitted a pellucid lymph in health, in

injected with red blood. In this case the pulse experienced none of the changes peculiar to hydrocephalus, being 70 or 80 to 100 strokes in a minute, except after the use of phosphorus, when it fell to 50.
In the case related here the Doctor has compounded his theory of Chorea by the multiplication of causes. In the first place he has hydrocephalus interna: then Chorea as symptomatick of the chronick state; and lastly, a supervening apoplexy which gave the finishing blow to the mortal existence of his patient.
"A sudden check to the accustomed secretions, such as discharges from the ears &c. sometimes appears the remote cause of both diseases."
"The muscles of the face in both diseases are affected, producing spasmus Cynicus, risus sardonicus &c."
If the theory of Dr Coxe be correct, that Chorea is nothing more than a "chronick state of hydrocephalus interna," why is it so seldom fatal? Why, in Chorea does the physician rely with confidence on the use of tonicks, cold baths &c. which in hydrocephalus, the most energetick practice too often fails to arrest its progress? Why is the first stage of hydrocephalus cured, if cured at all, by bleeding and the antiphlogistick regimen, while Chorea almost uniformly requires tonicks to brace the system? He says by habit the brain admits of the accumulation of a certain quantity of fluid without much injury, and "when death occurs, it probably arises from some sudden increased determination to the vessels of the brain, producing either a kind of acute hydrocephalus, or an engorgement of the vessels themselves; in either case inducing apoplexy."
However successful Dr Coxe may be in showing that collections of

of fluid in the brain frequently produce convulsions of the arms and legs. I think he has been extremely unfortunate in his attempts to prove, from the two cases he has cited, from his dissections or from analogy, that Chorea is "always symptomatick of a chronick state of hydrocephalus internus". The diseases occur in different habits, put on different forms, and require a different treatment.

In one of the numbers of the Repository will be found a dissertation on Chorea by Dr Pattison of Londonderry. This gentleman appears to have come a second time before the publick in support of a paper which he had previously written on the same subject, and which was refuted by Dr Cooke. The former publication of Dr Pattison I have never seen. His last contains the following remarks on the theory of Dr Cooke, and the mistaken notions into which it is calculated to lead those who rely on it in the treatment of the disease under consideration.

"If, as Dr Cooke supposes", says Dr Pattison, "Chorea be not an idiopathick disease, but arises solely as a symptom of chronick hydrocephalus, the characteristick phenomena of the latter should always precede or accompany the appearance of the former: whereas, upon a careful examination, we shall find that the symptoms of Chorea exist without any token of hydrocephalus, as strikingly exemplified in the case of my patient already alluded to, in whom its essential features prevailed long before it wrought the change which terminated in the fatal effusion into the ventricles of the brain."

He goes on by saying that if the cases of Chorea which came under the observation of Sydenham had been accompanied by hydrocephalus, that attentive observer would not have failed to mention so striking an occurrence

Dr Patterson supposes Chorea to arise, in most cases, from local irritations, acting upon persons of very delicate constitutions and ~~great~~ irritability. These irritations he thinks are most frequently found in some part of the intestinal canal, and are communicated to the rest of the system through the medium of the nerves. He founded his plan of treatment upon these indications, and relates many cases of its efficacy.

"From a review of 32 cases of genuine hydrocephalus," continues the Doctor, "I find that in 15 of them no convulsions took place; and that in any of the other 17 cases, spasms or convulsive motions did not take place until the hydrocephalus had subsisted several days, nay, in some, not until it had continued several weeks. To these 32 I can add 10 or 12, running similar courses, which have come within my own practice". He also has reason to suppose, from many cases which he enumerates, of wounds, inflicted on the head by external violence, in which no convulsions occurred, that unless the predisposition be present in the nervous system, "very morbid states of the brain may exist without producing convulsive motions."

I have thought proper to make several full extracts from the papers of Dr Cox and Dr Patterson, in order to lay down their opinions more fully than I could otherwise have done.

Having said thus much on the nature, causes and symptoms of Chorea, I proceed to the different modes which have been adopted in its treatment. The treatment of Sydenham was successful, though founded upon a false pathology, and was one which perhaps would not succeed at this day, and in this country. He made it a general rule to bleed and purge: but this need not surprise us, as it was a plan to which he

he was so practical that he put it in practice in most of the diseases which came under his direction. His ideas of the nature of the disease, and the indications of cure are given by himself in a few words, which I shall here copy. "To this disorder", says Sydenham, "appears to proceed from some humour thrown out upon the nerves, which, by its irritation, occasions such preternatural motions. I conceive that the curative indications are to be directed first to lessen those humours by bleeding and purging, secondly, to strengthen the nervous system."

To answer these indications he orders seven ounces of blood, "or such a quantity, whether more or less, as best suits the age of the patient" to be taken: and this is to be followed next day by a purgative. "And thus I bleed and purge alternately, till the patient has been bloodied three or four times, and purged after every bleeding, as often as his strength will admit." He recommends that the patient, about the same season next year, should be carried through a course of bleeding and purging, to prevent a return.

I need not say how pernicious this treatment might prove in some cases, were we to permit ourselves to be bound down by established rules, or rest ourselves in security beneath the cover of a great name. The judicious practitioner will never consider any fixed principle applicable to the system in a state of disease; nor permit himself to be overruled by the opinions of others, but be guided by his own judgement in the plan of treatment he is to adopt.

In general bleeding will be unnecessary, and frequently hurtful. Cullen found bleeding sometimes of service in "plethoric habits"; but in many cases, repeated evacuations, "especially by bleeding" were hurtful.

Savages also condemns repeated bleeding.

The indications of Cheyne were 1. To evacuate. 2. To alleviate. 3. To corroborate. He gave an emetick about once a week till he thought the symptoms somewhat alleviated, and afterwards depended upon tonicks. Emeticks are probably only useful in preparing the stomach for the use of tonicks. He used the chalybeates, cold baths, bark, and other equitable tonicks with great advantage. "He has witnessed the salutary effects of electricity in many cases, which performed radical cures."

"The cure of Chorea", says Professor Potter, "was once trusted to antispasmodicks, at a time when spasm crept into every disease, and antispasmodicks engrossed nearly one half the Materia Medica". Here musk, castor, asa foetida, and many other nauseous drugs of the same class were employed in great profusion.

Dr Hamilton, finding tonicks, unattended by evacuants, to fail in many instances, and thinking the disease to depend generally on irritation in some part of the alimentary canal, determined on giving a fair trial to purgatives, from which he had derived so much benefit in many other diseases. This is no doubt the cause of Chorea in a great number of instances; and here tonicks will not have their desired effects till the primae viae be first evacuated, and the cause of the disease removed. In his expectations of the propriety of this treatment he was not disappointed. He gave purgative medicines in such a manner that the operation of one should not entirely cease before the exhibition of another.

This is not the only evidence of their utility. "In several cases,

cases, says Dr Patterson, by Mr McMullin, it is evident that the involuntary motions, debility, and other symptoms of the disease were produced by local irritation in the bowels, which was communicated to the rest of the system through the medium of the nerves."
In such cases as this, reasoning upon the general maxim of "Sublata causa tollitur effectus" purgatives are the proper treatment. Tonics cannot exert their proper action on the system before this indication is fulfilled.
The book of Dr Hamilton has been considered by some only as an eulogium on purgatives; and this opinion may in general be correct. But we are compelled to acknowledge the correctness of that which is taught us by experience every day; and when we see this plan of treatment attended with success in so many instances we cannot hesitate on the propriety of at least giving it a trial. Purgatives have been recommended by this author in many other diseases in which there would appear to be much less hope of success. Who would have supposed, reasoning a priori, that the extreme debility to which the system is reduced in Typhus Gravior could be removed by the very means employed to reduce fever? Yet the practice of experienced physicians has dispated all our fears on this subject. The efficacy of purgatives in this state of things is attested by more than a single person, and their employment advocated in more than a single city or country. The practice of Hamilton is recommended in very strong terms by Professor Chapman of Philadelphia. He gives brisk purgatives every two or three days for some time, and when he supposes the irritation to be removed from the primae viae, he follows them with tonick remedies

Dr Cox condemns the universal measure of Sydenham to bleed, and adds "If the pulse be active bleeding is certainly proper; after which I should pursue a mercurial course, and follow it up with tonicks, as bark, colombo, steel, elixir of vitriol, hot wine, and the cold baths."

For the cure of Chorea all the tonicks may be employed with advantage, especially those from the mineral kingdom. The metallick preparations generally used are the oxyd and sulphate of zinc cuprum ammoniacum, sulphate and carbonate of iron, flores martiales, and nitrate of silver; the acetite of lead is recommended by some, but there are many others which are far superior to it. These must be continued in small doses for a long time, together with gentle exercise, generous diet, and cold baths. The shower baths is preferable to any other form. "A single dash of this", says Dr Potter, "invigorates the system, produces a reaction, and accumulates excitability."

A new and very valuable remedy has been lately introduced into the treatment of Chorea. This is the arsenite of potash, commonly called Fowler's mineral solution, first employed by Dr Dunton of this city. The efficacy of this remedy is now well established. It is at once a cheap and valuable tonick, and is easily prepared by every person.

The oxyd of arsenic is so extremely poisonous to the stomach that the employment of it requires great caution. The most fatal consequences may result from the carelessness of nurses, or a slight mistake in the person who administers it. The proper way of avoiding this is to dilute it largely, or give it in pills in combination with opium.

When used alone for some time it is apt to debilitate the stomach

and lose its tonick powers. It is proper therefore to give it with the tonicks, and alternate with all the principal articles of this class.

From neglecting Chorea while in the first stage, or from a continual exposure to its exciting causes, it frequently assumes the chronick form, and becomes so firmly rivetted on the patient that it is removed with great difficulty. This form of the disease are generally seen in those persons accustomed to a free use of intoxicating liquors. Unless such persons could be prevailed on to relinquish this habit, it is probable a cure could never be effected; and even then it would be extremely uncertain.

A Dissertation
On
Dyspepsia

Submitted to the Examination of
The Rev. Bishop Kemp D.D. Provost
The
Trustees and Medical Faculty
Of The
University of Maryland
For The Degree of Doctor of Medicine
By John L. Deaekle, of Virginia

A Dissertation

Dyspepsia. (the subject of the present dissertation) is derived from the Greek word δυς which signifies difficult, and πεπτω to digest or difficulty of digestion

There is scarcely a disease more common than the present, and few perhaps more complicated. The obscurity in which this disease is still veiled may be said to arise from two circumstances. First, the it early stages, in which other fatal diseases sometimes afford an opportunity of examining the organs principally concerned the cause of derangement is so minute as to escape observation, and before its fatal termination the change so great as to throw but

little light on the subject. Secondly it is known that the digestive powers of the Stomach depends on a fluid secreted by it, and that a morbid state of this juice must be one of the causes of Dyspepsia. but little knowledge of importance can be gained unless the cause of this morbid state could be known. From the variety of causes which give rise to this disease and the number of organs concerned, it is not unfrequently found, that in some cases certain medicines or means prove successful, whilst in others the same means afford little advantage, or are absolutely injurious. Even in different stages of the same case this is often observed to take place.

It is said by Dr Wilson "to be the most varied of all diseases. Beginning from simple and apparently unimportant deviations from health it gradually becomes so complicated, and often at length, as undermines every power of the

system, that it is difficult to give a view of its symptoms, which shall at once be sufficiently full and distinct. It is an affection of the central part of a most complicated structure, capable of influencing even its remotest parts, and each, through many channels, and in various ways,

And it may be said, that there is no disease, in which the Physician strikes oftener at random, than the present

Dyspepsia, may be said to consist of various diseases irregularly mingled together, sometimes one set of symptoms being most evident, then again another, with a great tendency to constipation of the bowels

Dyspepsia has been defined by Dr Cullen as, a want of appetite, a squeamishness, sometimes a vomiting, sudden and transient distentions of the stomach, eructations of various kinds, heart burn, pains in the region of the stomach,

and a bound belly." None of these symptoms are invariably present, and all of them never. So that, as Dr Good observes, "the symptoms of cardialgia, flatus, and emesis, with a few others, enter in irregular modifications into dispepsia. as those of dyspepsia enter into hypochondriasis"

Causes of Dyspepsia

The causes of a disease have been divided into remote, and proximate, but as in the present case the former so gradually, and insensibly lead into the latter, and only appear to be links in the same chain, we shall arrange them under one head,

In enquiring into the causes of this disease an attention is first directed to the stomach and intestines, as the organs in which it first makes its commencement.

The debility of the stomach may arise from

various causes, among the first and most common is that of eating too fast, and consequently not only overdistending the organs but by the food not being thoroughly masticated, imposes on the stomach double the labour which nature intended it to perform. Whereas by slower eating and more complete mastication, the material is presented to the stomach in a state in which it can be more easily acted on by the solvent powers of the gastric juice. Another cause is stimulating and narcotic materials taken into the stomach, and perhaps exerting some peculiar action on the coats of the stomach, producing thereby a deranged secretion of the gastric juice. Long continued use of bitters and aromaticks, large quantities of cold or warm fluids taken into the stomach, which act not only by the over distention, but the relaxation which they produce. Repeated vomiting. The immoderate use of tobacco in any form, but more particularly smoking and chewing.

there act by stimulating the stomach, and depr
iving it of saliva, which appears to be necess
ary both in the process of mastication and
digestion, Tea and Coffee has been said to produce
this disease, Tumours pressing on the stomach.
Sinking state of the Pylorus,
The debility, and indeed torpitude of the intest
inal canal is evident from the habitual
costiveness which so peculiarly characterizes
this affection, Whether this be direct or indirect.
intrinsic or sympathetic, as harmonizing with
the weakness of the stomach, it is not easy to
determine, but nothing can be a stronger proof
of the great inactivity of the intestinal tube,
from whatever cause produced, than the feeble
ness of its peristaltic motion, notwithstanding
the pungency of the acid, and other acrimonious
matters that are so frequently formed in the
stomach, and hence so frequently diffusing their
asperities through its surface" Dr Good

The morbid state of the liver is often a cause or is concerned in this disease, as is shown from the small quantity of bile secreted. And it is not improbable that that the inactivity of the intestinal canal may depend on the deranged state of the biliary secretion in conjunction with that of the pancreas, The Spleen has bin supposed to be concerned in dyspepsia

Among the causes which act more generally on the system are an indolent and sedentary life, in which no exercise is given to the muscular fibres or mental faculties, Too great exaustion from intense study not properly alternated with cheerful conversation, All the depressing passions, as fear, grief, anxiety, & And above all the too common practice of keeping late hours

Symptoms

The symptoms which characterize the first stages of this disease, and which more

from undigested food taken into the stomach.
are flatulency, distention of the stomach and
bowels, acid and putrescent eructations, Cardial
gia. There in the commencement of the disease, are
often the only symptoms which give much
uneasiness. so that the stomach may for a time
be so deranged, as but feebly to perform its office
without producing any important change
in the system, these symptoms continuing to
recur, the intestinal canal is soon drawn into
discase with the stomach. the secretions of
which appear to be altered not only in quality
but in quantity, The constipation now
becomes one of the most troublesome symptoms
ms. The above symptoms returning with
more violence. the patient is troubled with
nausea, vomiting, head ache, particularly
in the morning, From the irritation caused
by the morbid contents of the intestinal canal,
the patient is troubled with a variety of

symptoms. such as langour. pains in the stom-
-ach and bowels, a sense of heat. referred to the
stomach, which last in some cases prove very
obstinate. distention of the right hypoch-
ondrium. depression of strength. great despondency.
the countenance becoming pale and emaciated.
The disease continuing its ravages. and the mind
becoming involved. a general restleness seems to per-
vade the whole system: no one position in which
the patient can place himself. can be borne for
any length of time. In this advanced stage
the most easy position is on the back with
the sholders a little elevated. and inclining
to the right side. The patient in some cases.
is troubled with cutaneous affections. the skin
becoming dry and in some cases almost scaly.
He now and then experiences a chilliness. a low
temperature being almost insupportable. often
wearied with palpitation. some cough. furred ton-
-gue. and tenderness of the epigastrium sometimes

attends this last stage of the disease.

"This last symptom" says Dr Wilson Philips "never exists long, and to any considerable degree, without the pulse becoming hard, and often at the same time more frequent than in health"

Thus it is, that the constitution worn out, by the gradual accumulation of disease, organic derangement taking place, the powers of life unable any longer to be supported, finally yields to the disease

Treatment

Of all the diseases, which it falls to the lot, of the Physician to treat, the present is the most perplexing. He will often find his prescriptions neglected, and his most important rules violated.

"The patient" says Dr Good "must be in the first place, convinced of the necessity of putting himself under a new code of conduct, and be deeply impressed with the idea, that though he may have

continued his late plan of life for a considerable period of time, without having sensibly suffered from it, yet now that he is suffering nothing but his conforming to another plan can remove his present complaint."

The treatment of this disease we shall arrange under three heads. diet, exercise, and the medical treatment,

Of Diet

In making choice of the diet for a dyspeptic patient great care should be taken, to select that which agrees best with the stomach, or in other words that which is most easily acted on by the gastric juice. Here there is a difficulty which can only be overcome by experience, for the diet which is useful in one case, often proves mischievous in another. The flesh of old, is more easily digested than that of young animals, Mutton, with the exception of Venison, in most cases agrees better with the stomach than any other meat, beef with some persons agrees better than mutton, All soups are injurious,

The patient should eat little and often. New bread should be avoided. perhaps the best breads for a dyspeptic, are crackers and what is called brown bread. Vegetables, and acid fruits are inadmissible. Oily substances are difficult of digestion, especially if fried, High seasoned dishes are particularly injurious, no patient should partake of more than one dish at a time and that of the simplest kind. Large draughts of any kind of fluid are improper, Tea and Coffee act not only by some mischievous principal which they possess, but the relaxation and distention which they produce, the latter is also liable to become acid on the stomach,

The most innocent drink which a dyspeptic can take is water, There are some however who can take small portions of wine with impunity. or there who have been long accustomed to ardent spirits, can take dilute spirits.

Exercise

Exercise in this disease demands particular attention. Walking, and riding on horseback where the patient can bear them are superior to all others, this should not be done immediately after meals. The most gentle exercise is that of sailing, which is serviceable in most cases of debility. The mind should not be overlooked, it should be occupied by amusements alone, cheerful company, and conversation. Cold damp air should be avoided, he should go to bed early, and rise early. his bed should be hard. The forenoon is the most proper time for taking exercise, but if the patient is much debilitated he should not take it on an empty stomach.

Medical Treatment

When first called to a patient labouring under this disease. the stomach is often found overloaded and depressed with acidity, which should be removed by some mild aperient. as Rhubarb or Rhubarb and soda, and such food allowed as the patient can more easily digest, for the correction of flatulency and acidity some of the alkaline medicines should be used, Magnesia, Carbonat of soda. lime water &

Stimulants have been used in the cure of this disease, Of the tonics used, the principal reliance is on bitters and astringents. Columbo, gentian, camomile, Sarsaparilla, & are among the most important medicines in the treatment of this affection, Cold infusions of bark or Quassia are very useful in the more advanced stages, The acids both mineral and vegitable

are valuable astringents in certain states of the stomach. Preparations of Iron and Zinc have also proved beneficial. Frictions, and warm stimulating applications to the region of the Stomach are of use, When the liver is concerned and more especially where this derangement has taken place early in the disease, some of the preparations of quicksilver must be used, and that of the blue pill, is perhaps the best. In certain states of the stomach, and particularly of the pylorus the white oxid of bismuth has been used with great effect. Change of Climate has been serviceable. Cold bathing &c The prime object however must be to restore the Stomach, and the system at large, where the stomach is only secondarily affected, to its proper strength by a free and mild air, easily digested diet, exercise so as not to fatigue, a regular state of the bowels, and such medicines as excite the secreting surfaces generally, constitute the best plan

of treatment. Powerful measures are invari-
ably mischievous

Observations

on

Hydrocele;

Submitted to the consideration of the

Right Rev: James Kemp,

Provost,

The Regents & Professors

of the

University of Maryland.

For the Degree of

Doctor of Medecine

by

John Fitzhugh Jr=

of Baltimore.

1817.-

To

William Gibson M.D.

Professor of Surgery,

in the

University of Maryland.

This is dedicated, as a testimony of respect for his talents - and of gratitude for the advantages derived from his very valuable courses of Lec= =tures.-

by

the

Author.—

– Hydrocele –

From ὕδωρ, water, and κηλη, a Tumour, – literally signifies any ~~tumour~~ of water: – But it has been made use of by surgeons to express collections of water seated either in the membranes of the Scrotum, or the proper coats of the Testicle and its vessels. – The 1st of these, viz= that which is seated in the mem=branes of the Scrotum, is common to the whole Bag as well as to all of the cellular membrane which invelops both Testes. – It is for the most part only symptomatic of a dis=ease of the general system – and therefore we shall not notice this variety any farther. – But that collection of water which occupies the Tunica Vaginalis or in=vesting membrane of the Testis – and which appears to be entirely local, not depending on any general complaint – is the one of which we propose to treat, and intend to give as succinct an account of as the nature of the case and our very short time will admit. –

The opinions handed down to us by the ancients on this subject are so confused, that very few of them are worth attention. This we should not be surprised at,

as their ignorance of the Anatomy of the parts concern=
=ed, and their crude ideas of the situation of those
diseases could but lead them into mazes of erroneous
theories, and the practice predicated thereon could
but be pernicious.. However, we shall not occupy
ourselves in pointing out the errors of our predecessors
but shall only touch on some of the most important im=
=provements in the treatment of this disease, and then
proceed to detail the state of practice as given by the
most approved writers.-

To the discoveries of Monro, Haller, Hunter, & Pott, are
we indebted for a clear and accurate description of the
Anatomy of the Testis, & for a correct elucidation of this
disease..-

In a natural healthy state, it appears that an
aqueous secretion is always found within the cavity of
the Tunica Vaginalis; And seems to be intended for
the lubrication of the Tunica Albuginea thereby pre=
=venting an adhesion between it and the Vaginalis.
If from disease the due secretion of this fluid is pre=
=vented an adhesion of these coats is almost always a
ne=

-cessary consequence.- But on the other hand, if the secretion is morbidly increased, or the action of the absorbents are deminished, an increased quantity of water will collect within this cavity, which by gradual accumulation produces the disease in question.-

No age or period of life is exempt from this disease- not only adults, but Children are liable to its attack, and indeed Infants are even born labour-ing under it.-

The causes of Hydrocele are, perhaps, obscure, and are in the old books as various as the writers who touched on the subject- For it appears that almost every writer of any note had a cause of his own to produce the ~~disease~~ effect.-

The cause of the disease appears to be similar or very analagous to that of other Species of Dropsy- To wit: An increased secretion, depending on a Chronic inflam-matory action of the vessels of the part, by whatever induced- together, perhaps, with a diminished action of the Absorbents, from debility.- On this principle, this, as

well as every other Species of Dropsy may be ration=
=ally explained.-

This disease in its progress is so slow and gradual,
and at the same time so free of pain, that the pati=
=ent frequently does not attend to it, till he is in=
=truded on by its inconveniince in size.-

It commences with a tense and general swelling
which appears to be seated in the Testicle - and some=
=times succeeding accidental inflammation, as from
a blow or injury of any kind.- The patient frequently
cannot give any account of the cause or origin of the
disease - any farther than that the swelling had remain=
=ed small for a considerable time, and that it sudden=
=ly incirased rapidly to a great size.-

The tumour rises up on the fore part of the Sper=
=matic proces, in a conical shape as it increases
in size.- And, although, in the first stages the swell=
=ing does not extend beyond the natural boun=
=daries of the Scrotum, yet, in proces of time it
advances upwards, sometimes even reaching the
abdominal ring.- So that altho' in the early period
of

the disease, if it be not complicated with Hernia or with Varicocele, we can always distinctly feel the Spermatic proces, we cannot do so in its more advanced stage.-

The swelling altho' not solid, is sometimes hard and incompressible- most generally gives an elastic sensation to the touch- But in some cases, feels soft and lax.-

The Testicle may be felt towards the back and lower part of the Scrotum, & is known by its more solid resistance.- The tumour in Hydrocele is slightly transparent- which we may perceive by grasping it so as to smooth the rugæ- and permitting a strong light to pass thro' it- either by placing one hand over it, or puting it between a candle and the Eye.- The transparency is clearer in Children than in adults.-

This characteristic of the disease, on which writers have laid such stress as almost entirely to rest their proof of its nature- Mr. Pott thinks the most fallible and uncertain sign belonging to it- For it is a circumstance, says this celebrated writer, which does not depend

× vide Potts treatise on Hydrocele - Page 266.-

upon the quantity, colour, or consistence of the fluid constituting the disease, so much as on the uncertain thickness or thinness of the containing bag, and of the common membranes of the Scrotum. X

The Spermatic Cord should, in all cases, be examined; and when we can distinctly feel it between the Abdominal Ring, & the tumour, we are relieved from the fear of a Hernia: And we have then only to determine whether it be not an elastic tumour of the Testis itself. -

When the tumour extends up to the Ring, which we have already observed is sometimes the case, we must determine the nature of the case by other tests. viz: By an account of the appearance and progress of the disease - Hernia begins above and descends; Hydrocele immediately the reverse - In Hydrocele if we place the patient on his back and grasp the tumour we shall find that the pressure makes no change upon it: When the patient is elevated and made to cough there is no impulse communicated to the tumour by the convulsive shock given to

× Vide the tract, in Mr. Chas. Bell's operative Surgery on this subject, - Page 138. -

the general cavity of the abdomen.—x

There is frequently considerable difficulty in distin=
=guishing Hydrocele from an enlarged Testicle— For in
Schirrous Testicle there is often a collection of water
found between the coats, and may to the inexperienced
give the feeling of Hydrocele.— However, the weight, the
slight degree of inequality; the pain occasioned by
handling it; and the varicose state of the vessels of the
surface, will generally distinguish it from Hydrocele. And
the water may be frequently so displaced by conti=
=nual pressure of the finger as to enable us to feel
the body of the enlarged Testis.—

In Hydrocele the two coats of the Testicle are so firm=
=ly united at the posterior & middle part of the
tumour that no fluid can collect between them;
therefore this part of the tumour feels very different
from every other, "and from the hardness & firmness
discovered here it will be easy", says Mr. Pott, "to distin=
=guish it from Anasarcous Swelling of the Scrotum,
from the encysted Hydrocele of the Cord, and from
Intestinal Hernia.— The first of these, continues this

able

X. Vide Potts treatise on this subject = Page 270.-

Writer, is every way equal, tumid and soft; and every where equally receives and retains the impression of the fingers: the second, though circumscribed, not very compressible, and affording the sensation of fluctuation, yet does not pit, and is alike to the touch in all parts of it: And in the third, if the Testicle be distinguishable at all, it is found at the inferior part of the whole tumour." X.

In some cases where the operation has been performed before, the Testis adheres to the fore part of the Sac; in this case Mr. Chas. Bell recommends the operation by incision - As the Testicle would be liable to be wounded by the Trocar, were this instrument made use of. -

Cure.

The methods of cure resolve themselves into two - viz: The palliative or that which proposes only to relieve the disease temporarily; by simply evacuating the fluid: And the radical, or that which aims at a perfect cure without the possibility of a relapse. - The first of them, which is effected by opening the Sac in such

a manner as to evacuate the fluid- may be practised at any period of the ~~patients~~ life, and under almost any circumstances of health, climate, &c. &c.- The latter can only be accomplished by the complete abolition of the cavity of the bag, in such a manner as to leave no receptacle for a future accumulation of the fluid.- This lies under restraints, and prohibitions, arising from circumstances of age, constitution, state of parts, climate &c. &c.- For it appears that in some of the warmer climates the great rapidity with which inflammation runs its course, and the heighth to which it is liable to proceed, renders this operation not only unnecessary but highly dangerous.- -

Some of the older Surgeons have advised that the operation should be deferred until a pint and upwards of water has accumulated.- But it appears evident that the sooner the operation is performed after there is a sufficient quantity collected to prevent an injury of the Testis by the instrument, the better- as the great distention of the Tunica vaginalis

not only tends to thicken and render hard the coat itself, but to debilitate and lessen the activity of the absorbents common to both Tunics.-

The palliative cure Sir James Earle recommends to be performed at least once on those who determine to undergo a radical one, particularly when the bag is much distended, as it gives, says this gentleman, an opportunity of examining the state of the Testis, and also of permitting the cavity to be filled again only to such a size, as may be thought to be best calculated to ensure success in any future operation. —

All the operations which have been proposed have the same general principles in view viz: Inducing such a degree of inflammatory action, as to produce an adhesion between the Vaginalis and Albuginea, which form the Sac containing the fluid.—

There has been a variety of operations proposed for the cure of Hydrocele. But as we deem it not only unnecessary but useless to enumerate all of them, we shall proceed to describe two or three of the most approved

methods, which appear to be in modern practice.

Incision

This is perhaps the most ancient operation that has been proposed for the cure of Hydrocele - and was described by Celsus. - It was the favourite operation of Mr. B. Bell - who speaks highly of it in his treatise on this subject, and is of opinion that it possesses advantages decidedly superior to that of any other. -

The apparatus required for this operation is a Scalpel and Bistoury - the common pocket case of Instruments, Lint and Sweet Oil. - The patient being seated on the edge of a firm table, and the Surgeon grasping the Scrotum behind, so as to make the tumour tense on its anterior part - he makes an incision through the Scrotum from near the upper part of the tumour to the bottom; and after completely exposing the Sac, he punctures it with the knife; the forefinger is then to be introduced and the knife or Bistoury is run down, opening the tunica vaginalis to the bottom of the tumour. - The finger

X at the

Inches long - and a probe Six and an half Inches long - having a fine Trocar point at one end - and an Eye at the other - which is armed with white Sewing Silk, sufficient to pass with ease through the Cannula.

Mr. Pott began his operation by piercing the anterior and inferior part of the tumour with the Trocar and after the water was evacuated he introduced the Seton Cannula through that of the Trocar; passed it up, so as to be felt[x] superior part of the empty Sac - and then the Trocar Cannula was withdrawn. - The probe was then passed through the Seton Cannula, its point pushed thro' the vaginalis and Scrotum, And withdrawn - leaving one end of the Silk out of the superior orifice. - The Cannula being then with= =drawn the operation is completed. - As soon as the parts become easy by the decrease of the inflam= =mation - (generally about the 12th day after the operation) Mr. Pott recommends the Seton to be di= =minished by withdrawing, at each dressing, Six or Eight threads. - His dressing consists of nothing but a Superficial pledgit - upon each orifice, and a

discutient cerate, to cover the Scrotum.—

Mr. Chas. Bell after describing this operation concludes by saying that, "A priori, I should have said that this was the best of all the operations for Hydrocele; the neatest, the easiest, and the most manageable. But I have had no experience of it; and modern authority is entirely in favour of the cure by Injection."—

Injection

The use of Injections for the radical cure of Hydrocele was first introduced by an Army Surgeon by the name of Monro- who, notwithstanding the violence of the inflammation produced by his use of Spirits of Wine, effected many cures:- He however tried a milder injection- and has the credit of first recommending Wine.- Above a century ago Mr. Lambert advised injections of a Solution of Corrosive Sublimate in Lime water- and relates cases in which it was attended with success.- Mr. Sharp used Spirits of Wine but with the same inconvenience as experienced by Mr. Monro.-

To Sir James Earle are we indebted for the gene=
=ral introduction of this very valuable remedy
into practice - So much so that it has, thro' the
influence of his very valuable publication, sup=
=planted almost entirely every other operation.-
And in fact, it highly merits the very general sup=
=port which it has met with - as it is decidedly su=
=perior, in every point of view, to every other
operation that has yet been proposed.-

The apparatus necessary for this operation are.
A Trocar - A Scalpel - Wine and water - two parts
of the former to one of the latter - And a Syringe
or Elastic Bag.-

The patient should be placed on the side of a
bed and secured - The Scrotum should be grasped in
the hand - and an incision should be made, with
the Scalpel, of about an Inch in extent, thro' the in=
=ferior and anterior part of the Scrotum - completely
exposing the Tunica Vaginalis.- The Trocar should
then be introduced through the Sac, and as soon
as it has punctured the coat - the point of the Instru=
=ment

is to be carried immediately upwards, by which it is made to avoid the Testis.— Having withdrawn the Stilette and allowed the water to be evacuated, the Sac should be gently compressed, and the lower part of it raised, so as to expel the whole of the fluid.. This terminates the operation as a palliative remedy.— After having evacuated the contents of the Sac, if the Testicle be not much enlarged, hard, irregular and painful, we may complete the operation by the injection.— Before we proceed to this part of the operation, care should be taken that the extremity of the canula is within the Sac— for, says Mr. Chas. Bell, "the most serious accident which can happen from the operation, is the injection of the stimulating fluid into the cellular substance of the scrotum!!" — The Nose of the Syringe is then to be introduced into the canula and the Sac is to be filled till it rises to nearly its former size.— The injection should remain in the Sac about two Minutes and an half; unless the sensations of pain warn us to abridge the

operation.. Severe pain in the Cord and loins, with faintness, denotes a degree of sensibility in the membranes, which will be excited to inflamma= =tion by a very little irritation.-

The injection is changed in colour & very turbid when returned

The symptoms denoting a sufficient degree of inflammation, is a swelling of the Testicle, and slight redness of the Scrotum. (on the 2nd or 3rd day)

The tumour generally feels as if the disease had rapidly returned, and the coat had filled with water.. There is a shooting pain in the back and loins.. The inflammation however, gradually sub= =sides, the tumour becomes softer, and dissipates; and the Testicle is again felt.-

The patient should only be confined to his room - But if the inflammatory action advan= =ces too slowly, it may be increased by gentle exercise in the air, and more freedom in diet.

If it proceeds rapidly and threatens more pain and swelling than necessary, then the patient must

An Inaugural Dissertation on Muscular Motion

Submitted to the examination of the Right Reverend James Kemp D.D. Provost and the Regents and Medical Professors of the University of Maryland For the Degree of Doctor of Medicine by

William H. Magill of Pennsylvania
Honorary Member of the Baltimore Medical Society.

Littus ama, altum alii teneant. Virg.

March. 1857.

To Doctor James Smith
of Baltimore;

Under whose direction I have pursued and closed my Medical Studies.

The friendly instruction which you were ever ready to communicate and the recollection of the polite attention received both from you and your Family during my residence in it, will always excite in me the highest sentiments of esteem. —

Gratitude and respect is due from every individual particularly to him who has been engaged in the most active exertions to alleviate the evils of Human Nature, and may they still be crowned with continued and increased success, permit me then to offer you this the first fruits of your instruction as the public mark of my acknowledgement, while my Heart shall, in secret, continue to pay you the still dearer tribute of Gratitude due from

Your Friend and Pupil

William H. Magill.

To the Medical Professors
in the
University of Maryland.

This Dissertation is inscribed as a testimony
of Gratitude, for the politeness with which
they have always honoured
the Author.

To Maxwell McDowell M.D.

Professor of the Institutes of Physic

in the

University of Maryland.

The following Essay is inscribed as a tribute of respect for his politeness as a Gentleman, and a testimony of high esteem for his Talents as a Teacher,

by the

Author.

Introduction.

To develope the operations of Nature in any of the Functions of the Human System; to trace the means by which she is rendered capable of effecting her purposes; and above all to attempt the investigation of the first Cause are subjects which have defied the powerful Genius of the most illustrious Philosophers.

If these things be so difficult or impossible of attainment to the greatly learned, how must a Student tremble at the importance of his undertaking! — giving loose to the fancy he soars inconsciously into regions unexplained or incomprehensible, and shrinks back confounded and dismayed. But ambitious of being ranked among the worthy he again essays his powers, and urged on by this wonderfull passion as well as by the regulations of the University he reduces his ideas into the form of a Theory which if not convincing to others is at least to himself satisfactory.

In this view the author of the present dissertation presents himself, and while he hopes applause for the merit of his attempt, wishes for success in its execution. ——

When we contemplate the conformation of the Human Frame we are filled with wonder, awe, and admiration. The peculiar adaptation of the various Bones which give firmness to and support the other more delicate parts, their construction and the recollection though how many changes they must have passed before they attained their present hardness whose durability like that of marble & yet more permanent has gained them the high epithets of "Monuments of Animals which have long ceased to exist", at least within our knowledge, the loathsome appearance which the Skeleton exhibits as the only remaining traces of what was once both beautiful and great, all conspire to raise in our minds an inquisitive research into the cause of such changes the principles on which they depend and a general knowledge of the history, the organization, and habitudes of the animal whose relics happen to be the subject of our speculation. But when in pursuit of this knowledge we are convinced that this ponderous and apparently unwieldly mass has been mantained in active exertion for years by a portion of its own system far inferior both in texture durability and weight, by those parts which are termed Muscles and whose slender filaments are capable of such a wonderful effect. we pause with astonishment, and scarcely credit the evidence of our

senses. The action of those fleshy portions is termed Muscular motion, and the immediate agent which affords them this incredible strength is the subject I am about to investigate.

The cause of Muscular motion has long been a source of contention among the greatest Physiologists, while one party insisted on the peculiar conformation of the muscular fibre as sufficient to explain every thing, another more subtile brought to their aid a foreign agency, again this last party were divided in regard to the action of different kinds of Muscles, and that the moving fibres were under the controul of the will respecting certain muscles, while those of others were excited Specifically.

and here I premise that it is not my intention to examine the mode in which muscles do contract, but endeavor to expose the principle of their action, and first permit me to state a few general facts in illustration.—

The contraction of a muscle is at all times a very great Phenomenon as that of the Heart, the Intestines and the Sphincters will evince.— Different muscles however are best excited by their peculiar Stimulus, thus the Heart by the Blood, the Bladder by the urine, the gall ducts by the Bile and the alimentary canal by the food forced into them act by a specific law of reciprocal affections; But independently of those peculiar stimulating subjects

they are likewise liable to be excited and violently too, by other substances which are not congenial with their regular organization, thus the Heart is thrown into morbid contractions by the presence of air in its cavity, the Bladder labors greatly by the presence of a Calculus, and we all know the effect of Injections upon the Intestines.—

Physiologists have been at great pains to discover the true construction of a muscle, they have pushed their inquiries far indeed, but the ultimate result is that even the muscle itself seems to be composed of nervous filaments; this fact in particular I wish to be borne in mind, as effects on the muscular fibre may in a great measure be referrible to it, in some of the reasonings to be adduced.—

That the nerves are the means by which the muscles receive their power of contraction has generally been admitted, Experiments prove that when the nerve leading to any muscle is compressed that muscle becomes paralysed and languishes, nor can any forces call it into an action similar to the vital one, but if the compression be removed it recovers its accustomed activity.— A Ligature placed upon the Aorta produces a paralysis of the inferior extremities, yet we are to consider the Blood vessels of a muscle in that view only as constituting a part of the integrity of a Muscle, to go further into this

inquiry would lead too far from our present subject as the mutual dependence of each portion of the system is so immediate as to resemble the attempt to define the end of a circle.—

The muscles appear to be possessed of two powers distinct from each other as refers to the function which each has to perform in the system.— In one class are arranged those that are termed voluntary and which observe the dictates of the will. and in the other such as are Involuntary and act independently of volition. The former are supposed to be governed by the Vis Nervea; the latter to be under the influence of a Vis Insita or inherent power distinct in every respect from the other agent as its name imports.— Here it becomes requisite to examine the validity of each doctrine, and first the arguments brought forward and in support of the Vis Insita.—

When a muscle obeys the impulse of the will as in bending the arm at pleasure it is done instantly here the Vis Nervea is said to operate. But on the contrary that great muscle the Heart continues to act independently of this influence and consequently referrible to the Vis Insita. Here we observe a most remarkable proof of the wisdom of our Creator, for if the will exercised any influence over the Heart or rather if the movements of that viscus depended upon voluntarily exclusively, we would soon cease to exist, as sleep necessary to our existence would suspend

its operation and dissolution be speedy.- I hope to be able in the course of my essay to explain this Phenomenon.—
If a muscle be cut out of the body (completely of course seperated from the supposed influence of the Brain) and if it be irritated it contracts and this contraction is renewed as often as the exciting power is applied. This fact may be proved at any time by taking a chickens heart, which on the application of any sharp pointed instrument can be forced into action for a considerable time.—
Every one who has examined this subject with attention is apprized of the circumstance that the Head of a snapping Turtle retains the power of action for days after its seperation from the trunk of the animal.— Those particulars are generally believed to be inexplicable upon any other principle than an essential difference between the Vis Insita and the Vis Nervea.— the objections however weighty I shall endeavour to reconcile to that great agent whose cause I have espoused.——
Having thus obtended the most powerfull arguments in favour of the Vis insita by which all the other portions of the system acting under the same involuntary principle may be elucidated and which so ostensibly impair the interference or even existnce of the Vis nervea I shall proceed to expose such facts

as I presume will overthrow this specious mode of reasoning and enable us by critical inference to compare the variant theories and decide upon their respective merits.—

As we can only depend upon the principles of Theory in every Physiological subject it remains that we embrace those features of the Science which seem to comport best with truth and most justifiable in their deductions.—

The Brain is generally allowed to be a gland destined if not for more purposes at least for the secernment of the Nervous fluid of Authors or the Electroid fluid of the illustrious Rush.—

It is unnecessary in this place to hesitate in affording proofs of the glandular power of this organ.— we know the Nerves are the Sentient agents of the System and that they originate from the Brain, yet in order that our idea's may be correctly understood it may be requisite to remark that we include as the Secretory of nervous influence not only the Brain itself but the Medulla oblongata and by no great Stretch of imagination the Spinal marrow itself and from this Medullary mass the great nerves of the whole System originate; hence inferences otherwise involved in obscurity will be sufficiently explained, and the consequence of this remark be more largely expatiated upon hereafter.—

The fact being proved that the big Nerves is derived from

the Brain and distributed over the system by means of the nerves which may be aptly termed the Internuntii or messengers. I shall now take a view of the action of a muscle in general. —

That a muscle may act in obedience to the dictates of the will or that it may not we maintain as a first and given principle. — and that this rule holds good wether that muscle be voluntary or involuntary is perfectly indifferent as respects the truth of the position, if determined by the health of the system or some uncommon power which the will has acquired over it. In cases of Palsy of the voluntary muscles as for instance those which bend the arm and which are acknowledged to be under the controul of the big Nerves, what becomes of the will? we find them refusing to obey its dictates and they are reduced to the same state as if they had never been subservient.

Again the Gastrocnemii and many other muscles act in perfect obedience to the will but how often do we find Cramps Spasms nay even Tetanus often ending in death assail this boasted Emporium of Muscular action! how does it happen then that those effects take place contrary to volition and in spite of the big Nerves universally granted to be the cause of their contraction? we must then recur to premises already substantiated, to wit, that the same muscle may act in

obedience to, or independently of the will and this once proved will serve to unravel the intricate mazes of Philosophical ingenuity.— We have already remarked that a musele cut from the Body is liable to be excited to action upon the application of proper Stimuli, if the musele be irritated in its fibres it will contract, and if the nerve which leads to the musele be irritated not the nerve but the musele will be thrown into action here then we have the same result from two experiments and wether the musele in question has been denominated a voluntary or involuntary one while in the living system we are convinced that the same effect ensues in both instances. When the nerve is irritated and the musele contracts no one can be hardy enough to assert that any other than the vis nervea occasions the action, and as the museles themselves seem to be made up almost of nervous filaments why may we not conclude that the same power is the cause of the excitement when the musele itself is stimulated?

But the Heart has at all periods been adduced as an invincible argument in favour of the vis insita, to those who have trusted more to experiment than Speculation the facts appear the same as in the other portions of Muscularity.— The Heart is liable to the same Phenomena as any other musele when seperated from the system as already observed, if the Heart can be roused into motion as well as the rest of the muscular system in a similar situation why

should we look for a different mode of explication for the same Phenomenon,- Nature scarcely if ever employs too methods to effect the same intention, and there appears to be no plausible pretext for a deviation in the present explanation.—
It has however been contended that no art or custom can make the Heart or Intestines subject to the will, admitting as I have done throughout the whole of my discourse that some muscles act independently of the will both for the proper conformation of the system as well as to guard its integrity from any inattention on the part of volition, and insisting in my premises that the vis Nervea and the vis insita are but the same power modified for wise purposes beyond our investigation— yet the History of the following case while it records one of the most singular examples perhaps in the annals of Medicine will I hope convince the supporters of the doctrine that the vis insita is distinct from the vis Nervea, of the fallibility of their arguments.
The voluntary power having such a controul over the Heart and indeed the entire system, tends so greatly in favour of the Electroid principle or vis Nervea pervading the whole of our organization that it appears only requisite to relate the circumstances——
Regret in the history of this case that both the Authority from which it is derived and the time at which it happened

have entirely escaped my Memory, but as it has been extensively published it must of course be generally known— the circumstances are these— Some Medical Gentlemen were informed of the wonderfull power a certain Officer possessed over the action of his Heart so that he could die whenever he thought proper!— to gratify their solicitations the experiment was made in their presence— the person stretched himself at full length, closed his eyes and the Physicians took their stations at the radial artery— the first circumstance that roused their incredulity was, the cessation of the pulse at the wrist— next a failure at the bend of the arm and lastly so complete an absence both of arterial activity and respiration that the bystanders were of opinion that vitality had absolutely left the Body!— in this situation he remained for half an hour or more— his recovery was equally surprising— they at first discovered a slight action of the Heart which gradually increased— the beating of the Humeral artery was next felt and at length the pulsation at the wrist returned to the great joy of his inquisitive friends.— the patient at first was extremely faint and languid but after the lapse of a few hours was restored to his original vigour and activity—

Is it requisite after this striking and conclusive proof that the action of the same muscle may or may not be placed under the controul of the will to adduce another? surely this is sufficient for our purpose but I will still proceed a little further.

In my opposition to the supporters of the Vis insita I beg to be understood that those only are alluded to who suppose that principle to be independent of the nervous influence and derivable from sources other than the Electroid Fluid. To contend with the latter would be useless as I have I trust already proposed arguments convictive of the points in question.-

Respiration is a subject upon which much stress has been laid by those who regard the inherent power of the muscle and its voluntary action to depend upon an endowment wholly distinct from each other both in its nature and origin; yet even in this case they allow that it is a mixed motion,- this is a kind of half way confession that it must be the same power modified. We are all aware that the muscles of respiration may be brought to obey the will; or rarely in many cases do we request a Patient to take a full inspiration of the Lungs for the purpose of ascertaining the diagnosis of particular complaints? we have no doubt but the Patient can obey our directions, and in compliance with them is not the action under the controul of the will and consequently the Vis Nervea? Yet is it not unreasonable that such as maintain

Respiration to be independent of the will should request persons to perform it? the absurdity is too glaring for serious investigation. That Respiration is carried on inconsciously I pretend not to deny, but if it can be effected by Volition where is the necessity of having two causes for the same effect? It certainly would be preferable to ascribe its effects to the vis nervea altogether and infer that for the preservation of life it is sometimes necessary that this cause may produce its effects without the immediate interference of the will.—

In obstinate constipation of the Bowells neither the vis insita so boasted of as a Guardian of those parts, nor the vis nervea are efficient to relieve the impending evil, but yet we are well aware that voluntary efforts are available in the usual evacuations of the intestinal canal.— If then the vis nervea can have an effect over such parts why should it change place with the vis insita as whim or fancy may dictate! shall we once more to impress upon the mind, bring forward the palsy of voluntary muscles those parts of the system which quick as lightning ~~once~~ formerly obeyed the flashes of volition now inert, suspended, deadened beyond the most strenuous efforts of the will.— Happy indeed would be our situation if the muscular system in those cases could always be arrayed under the banner of volition! then indeed might we bids defiance to disease, scoff at the medicated prescriptions of Physicians, mock

he toilsome operations of the Undertaker; and as truly free agents
wait the sentence of death, who when the springs of Life have
been completely worn out and all sensual enjoyment no longer
to be acted upon might be hailed with pleasure as the best
friends to relieve us from all the evils of our existence!—
But even under this Paralytic state of the muscles there must be
a power to preserve life in them as we often find paralysis cured.
What then is the nature of this agent or whence does it obtain its
influence, can the vis insita act in its place and during its absence
or shall we not rather say that the muscle derives its source of
support from the same cause only in a less degree which first gave
it life and vigour, to wit, the nervous influence.

There remains a principle to be accounted for which perhaps may be
deemed rather novel in the investigation of this subject but which I believe
to be essential in proof of the positions before advanced.

For a long time a question has been agitated whether the Brain or
Heart be first organized if the Heart be first formed consequently
the vis insita must be the predominant faculty, or in other words the
vis nervea or that power derivable from the nervous Influence be
altogether abandoned. But if the Brain be the Primordial of excitem
nt the Heart or vis insita must be subservient and here the subject
becomes so abstruse as to be rendered scarcely comprehensible.

The Punctum saliens or the first visible point of action of animal life is found

be the Heart and from this spot animation seems to be diffused over the
hole System. But when aware of this imposing argument we coolly
nsider the cause of action in the more advanced stages of existence
d that muscles may be excited by means of the nervous power and
hen by comparing great things with those of less magnitude but not
minor importance we find results similar, we are constrained from
ract, from argument and from analogy to decide that as the vis
ervea is necessary for action in the more matured state that the nerves
reviously existed to the action of the muscular fibre and consequently
hat the Brain however invisible to our investigations must be the
ource whence the sentient principle emanated.

In cases where animals have been produced without Heads if such
here ever the case - nature has ordered no doubt that the Spinal
arrow should be sufficient for the secretion of the Electroid
luid especially as its existence is limited; the animal dying
mmediately after birth. No instance ~~is known~~ has ever yet been recorded
here the whole Medullary tract has been wanting and the animal in the
njoyment of vitality. - Thus in the instance of the decapitated Turtle may
ot the Brain continue to afford the contractile principle to the muscles
f the Heads, this is by no means more irreconcileable than the fact of
the Heart which when cut from the system and irritated untill it no
longer obeys the stimulus, may even after it has become dry, let it be
oaked in warm water & it will regain its susceptibility of irritation.

e body of the same animal referred to above will continue its
reomotive powers for several days after the head is taken off
is beautifully illustrated in the works of the celebrated Goldsmith
animated nature. If the reference to the source of action in those
particular instances be not satisfactory to the antagonists of
our Creed, let them seek for a better source of origin for their vis
insita than we have attempted, let them array their reasonings on
the subject impartially deduced and I do not fear the decision.-
ordinary life it appears almost impossible to remain in the same
position for any length of time, the muscles in action become exhausted
of their excitement and our feelings induce us to bring them into the
same state hence the necessity for exercise and rest to accord with
the general regulations of the Animal Economy.— These muscles are
all voluntary yet when subjected to experiments out of the Body obey
the same Laws as those denominated involuntary, and we throw the
gauntlet to our opposers and demand to be informed what more
reasonable method they will offer for the solution of this Phenomenon.
The venereal appetite has been advanced as a proof that the vis insita
is distinct both in its nature & source from the vis nervea. The
venereal appetite only appears at a certain period when by its
evolution the system becomes capable of generating its species; no
parts perhaps are more abundantly supplied with nerves than
those very parts, but to prove how they become subject to the will

uld be to examine the history of ideas a subject foreign to my
esent attempt. but I may propose one question would not any
erson in his senses however wrought up by this mighty passion
luntarily restrain his impetuosity if he were certain of encoun
tering chancres and an ulcerated Bubo? This is but one instance
mongst a great number which might be brought forward to
ove that the venereal appetite is in most cases under
e controul of the will, its fury is generally in accordance
ith the voluntary power, and it is owing to the vehemence to gratify
ur wishes, that renders it liable to be classed against our opinion
f then this impulse of the system may be subjected to the vis nervea
here is the necessity of endowing it with the vis insita.
In distortions it has been triumphantly asked what has become
f the vis nervea in the antagonizing muscles and has a part of it
xhaled? as we are equally ignorant with our opponents of any
rocess by which such exhalation could take place we would
ttribute this effect to some unknown cause acting upon the source
f voluntarity, but has the science been reduced to such certainty, have
ve become so intimately acquainted with the nature, uses and diseases of
he nerves, Brain and muscular motion as at once to throw odium upon
a contrariety of opinion! what I would reply becomes of the boasted
vis insita in cases of constipation and its still more needfull existence
in those of Impotency both of which are insisted on to be under its

mediate controul? ——

The sensitive plant the Dionea muscipula and several others have been usually mentioned in the discussion of irritability, it not in my power to investigate their relative qualifications as to render them significant to my subject, though no doubt the best Botanists, have asserted they have nerves, their contractility may be explained on nearly the same principles already advanced in this Essay. —— Irritability is varried according to the application of the stimulus applied and the nature of the part on which its effects are produced, thus some irritants applied to a delicate part would produce destruction which when exerted on a more substantial portion would cause but uncommon contraction; a spark of fire upon the skin produces a temporary irritation and slight effects, but effecting the Eye would involve disorders far greater in pain and more important in its consequences than the apparent cause of irritation. ——
And in the same way by a disproportioned power we often see Human existence annihilated by the violent impression of a sudden flash of Lightning. —— The nature of the nervous Fluid which animates our frame, the motive cause which brings it into action and diffuses it over the Muscular system; why it should in so great a degree be confined to the fibrous portion of our frame; or in a word how or whence it is generated; are subjects of speculation incompatible with my present undertaking and in my humble opinion only

ributable to the Great Being who has given us existence. ——
How are we wrapt in mysterious admiration when even a new-born
nimal performs such compound motions as are scarcely definable
Mathematical calculation. —— In cases of great irritability
would be a desideratum in the practice of medicine to know the remed
s — Opium and Electricity as acting upon the vis nervea are certa
ly the most general prescriptions, but there are many others
hich act more powerfully upon the nervous system, which have
t at the present period been brought forward into general
hibition — The period may perhaps arrive when regarding
he cause of muscular motion, such remedies will be administ
ned as are known to exercise their influence over the vis nervea
in proportion to the existing exigency. —— —— ——
Shall now sum up the principles contained in the foregoing sheets, — that
muscles possess a twofold property, a voluntary and involuntary action.
that the same muscle which is known to act under the influence of
the will and of course the vis nervea is at times liable to be put
into action independently of volition. that the Brain and Spinal
marrow are capable of producing the principle of Irritability — that the
vis insita and vis nervea are one and the same power only differently
modified, that we can no more comprehend how a muscle acts in
obedience to the vis nervea than to the vis insita of our opponents,
that they are both derivable from the same source and their various

modifications are intended by a wise and benificent
Providence for purposes inscrutable but all tending to
our self preservation. With these remarks I close the task
assigned me and to the different Professors of the Unive
sity I tender my acknowledgements for the instruction
and favours they have so frequently bestowed.

An
Inaugural Dissertation
On Cataract;

By Richard Weightman,
of Washington City, D. C.

March 22. 1817.

Of the Cataract.

Previous to entering upon the disease under consideration it will be necessary to give a partial anatomical discription of the eye sufficient for practical purposes. The eye being that organ, by the instrumentality of which we are advertised of the presence, magnitute, and distance of external objects, is divided into two parts, namely, the tunics and humours, the ~~former~~ retina or nervous expansions, the former the vehicles which convey the the rays of light, the latter the immediate seat of vision.

The eye has three humours the first is denominated Aqueous from its being perfectly fluid, and of

the consistence of water, it occupies the anterior chamber of the eye and answers a twofold purpose, that of admitting a free motion to the iris and of increasing the sphere of vision. The Chrystaline Humour is situated posteriorly to the aqueous humour and pupil which is nothing more than a perforation of the iris, this humour serves to collect and concentrate the rays of light. The vitreous humour is placed behind the lens. It distends the general ball of the eye into a regular sphere.

Of the Coats of the Eye.

The coats of the eye are divided into three proper and two partial besides the capsules which immediately surround the humours.

The Sclerotica or external coat of the eye derives

the consistence of water, it occupies the anterior chamber of the eye and answers a triple purpose that of admitting a free motion to the iris and of increasing the sphere of vision. The Crystalline humour is situated posteriorly to the aqueous humour and perfectly which is nothing more than a perforation of the iris, this humour serves to collect and concentrate the rays of light. The vitreous humour is placed behind the lens. It distends the general ball of the eye into a regular sphere.

Of the Coats of the Eye.

The coats of the eye are divided into three proper and two partial besides the capsules which immediately surround the humours.

The sclerotica or external coat of the eye arises

its name from a Greek word which signifies to make hard - it is not continued into the Cornea as has been supposed by many Anatomists, but may be seperated by maceration - The Sclerotica in its healthy state has few if any vessels that carry red blood, the great vascularity so manifest in opthalmia is in ~~tunica~~ the tunica conjunctiva. The Cornea is that transparent horniline membrane which occupies the anterior portion of the eye having two laminæ connected together by a delicate cellular membrane, it is lined internally by a very thin membrane supposed by some Anatomists to be the capsule of the Aqueous humour.

The next proper coat of the eye is denominated Choroides from its resemblance to ~~a~~ one of the

membranes of the Secundines, it is abundantly supplied with nerves and blood vessels - has two Lamina and several processes.

The Iris is a membrane which hangs before the Chrystaline lens having a foramen in its centre, which is called the pupil, which in the healthy subject varies cardinally in size, according to the degree of light to which the eye is exposed.

The last or internal coat is denominated Retina, this coat is formed by the expansion of the optic nerve and is the seat of vision.

The word <u>Cataract</u> is derived from a Greek word which signifies to disturb. This is a species of blindness arising from an opacity of the Chrystaline lens or its capsule.

It appears from the writings of the Ancients that they considered this disease to arise from a membrane covering the pupil, this ~~opinion~~ opinion prevailed till the year 1656 and the generality of practitioners remained ignorant of the true seat of the disease till as late as the year 1713, when the indefatigable Heister with others refuted the erroneous doctrines of the Ancients and established the fact that the lens or its capsule was the true seat of the disease.

Of the Symptoms.

The Cataract appears first as a speck occupying the whole or a part only of the pupil, the colour of the speck is sometimes of a deep white but most generally of a grey. In the incipent stage of the disease the Patient complains of a cloudiness of vision

and can perceive objects more distinctly in a dull light than in a bright light; this is owing to the pupil being more dilated in a moderate light and thereby permitting the rays of light to pass through some part of the lens which yet remains transparent.

Of the different kinds of Cataract

When the lens possesses a degree of firmness, or when it is more indurated than in the healthy state it is denominated a firm or hard cataract; when the lens appears to be converted into a whitish fluid it is termed a milky cataract; and when it becomes of the consistence of thick jelly it is then denominated a caseous or cheese-like cataract. Not unfrequently after an operation either the anterior or posterior portion of the capsule of the lens assumes a

whitish appearance which has received the name of secondary membranous cataract. Richter and Pott have attempted to explain, previous to an operation by certain criteria, whether the cataract be hard or soft, or of a fluid consistence. Richter observes the harder the cataract is, the thiner and smaller it becomes. In this case, the disease presents either an ash-coulered, a yellow, or a brownish appearance. The ~~interspace~~ interspace betwixt the cataract and pupil is very considerable. The patient is very distinctly discerns light from darkness, and can even plainly perceive large bright objects. In the dilated state of the pupil, a black circle surrounding the lens is very perceptible. The anterior surface of the ~~convexity~~ cataract appears flat without any degree of convexity.

The fluid cataract has usually a white appearance, and irregular spots and streaks, different in colour from the rest of the cataract.

Causes

It appears that this disease owes it origen to the combined agency of heat and light, hence blacksmiths and glassmen are the unhappy victems of this malady, sometimes it arises without any assignable cause. When the catarat arises from external violence, as it sometimes does, the disease is more likely to get well without any operation.

Of the Operation

There are two methods generally resorted to by Surgeons for the removal of the Cataract, the first is extraction, by which we are to understand

the removal of the lens from the eye. The second is depression, which consists in removing the lens from its natural position and burying it in the vitreous humour. It has long been a ligigated point which of these operations claims the superiority, but since couching is less difficult and may be performed as often as it may be found necessary, and moreover that the capsule may generally be removed at the same time with the lens, I shall decide in favour of the ancient method.

The principal object the Surgeon has in view in this operation, consists in removing

the opaque lens out of the axis of vision by means of a ~~needle~~ needle, and this may be accomplished by placing the patient on a seat lower than that of the operator, with his eye exposed to a ~~strong~~ north light, and in such a position that the rays of light may fall obliquely on the eye; and at the same time, an assistant should be placed behind the patient, with directions to support his head, and with his fore & middle fingers raise the eyelid without causing the least pressure; the Surgeon should next place himself on a chair higher than that of the patient with his foot on a stool,

placed near the patient, that his knee may be raised high enough to support the elbow, and to bring the hand with which he means to operate to a level with the eye. The operator having directed the patient to turn the eye towards the nose, is to introduce the instrument through the sclerotic coat, at the distance of one line from the margin of the cornea. We are then directed to carry the point of the needle immediately over the opaque lens, and in the first instance to depress it a little downward; and having got thus far, we are to push the point transversely, as near as possible the margin of

the lens, on the side next the internal angle of the eye. The handle of the needle must then be inclined towards the operator, by which its point will be directed through the capsule, into the substance of the lens; and giving to the needle a semicircular motion, and at the same time inclining it downward and backward the capsule will be lacerated and may in the generality of cases be conveyed with the lens, deeply into the vitreous humour. After the operation it will be necessary to apply a small compress of linen; the patient should be kept in a quiet, dark room, and in a horizontal position, till the third or

day when a weak light may be admitted into
room. Some ~~milk~~ mild aperient may be a
ministered with advantage the following a

An Inaugural dissertation

On

the degree of

Doctor of Medicine

Submitted

To the consideration

of the

Right Revd. James Kemp D.D. Provost

and regents of the University

of

Maryland

By

Jacob Alexr. Dashiell

Harford County M.D.

1817.

To Doctor Thomas E. Jones

of Hanover County.

Motives of the most responsible nature have induced me to make this dedication to you, being thoroughly convinced that I have derived unexpected and unusual benefit from your instruction and intelligent conversation. The communication of knowledge as well as the politeness and attention with which you and family have always honoured me, while prosecuting my medical studies under your auspices, demand in the most impressive manner my most sincere thanks. I therefore offer this as a timid testimony of my most sincere gratitude and esteem.

L. H. Preston

An Inaugural Essay
on
Tetanus or Locked jaw

In entering upon a subject of this kind I feel the embarrassment and confusion that naturally would result from the difficulties which must necessarily present themselves to a juvenile mind. were I to consult my own feelings and inclinations; I should not at so early a period of my life; make known my sentiments upon any subject. hoping as it were just entered the threshold of science. I feel the want of experience and a more mature judgement; properly to digest the principles I have been taught in this University. It is therefore with no small degree of diffidence, that I presume in this instance to yield Obedience to its laws; the more because there is not in the long catalogue of diseases to which the human race is subject; one; on which I could hope to offer any thing new: it is not therefore with such an expectation; that I have chosen Tetanus for the subject of my dissertation and must plead the necessity of invoking your indulgence

" for the many errors and imperfections; you w
no doubt find in this feeble attempt to fulfil a la
of the University. But relinquishing introductory p
eology as totally unnecessary; I shall cheerfully sub
to your very high consideration the subsequent sh
of this essay; and without hesitation enter upon th
discussion of my subject. In reflecting on the num
nous diseases to which the human family is subje
Tetanus ☰ which is derived from the Greek word ΤΕΙ
the signification of which, is, to stretch ☰ seems ver
deservedly to be one out of a numerous class of a
ses, which is entitled to our highest consideratio
and attention. The mode of treatment in thi
disease has been various and diversified, each one h
a certain set of medicines which he thought
preferable to all others, and among the rest, t
use of the lancet has been suggested, against w
the greater number of the most respectable writers
have given their decided opinion and condemn
it as prejudicial in all cases.

Amidst such a variety of opinions and Sentiments, perplexity and uncertainty must have been natural and inevitable consequences. hence it has been considered an incurable disease. pages upon pages have been written on it and medicines almost innumerable have been exhibited, according to each one's notions of the disease, although sorry to relate, they have not been capable of procuring that relief and mitigation of the sufferings of those whose unfortunate lot it was, to be afflicted with this horrible malady, that might have been expected from the magnitude of appearances. Popular systems have been introduced into the science of medicine, which were thought to furnish sufficient data to account for all the phenomena of disease, but we have experienced the folly and incorrectness of those theories, by the justly merited fall and rejection of the vis medicatrix natura of Stahl, the morbid Mentor of Boerhaave, and even the famous spasm of Cullen after a temporary triumph, has been

forced to retire before the superior blaze of conv-
-ing evidence. Thus since a more recent research an-
-vestigation have incontestibly proven the insuffici-
of those Theories to answer the purposes for which they
instituted, the science of medicine has been divested of
a great portion of its rubbish, which had implica-
many of its cultivators for so many centuries pas-
and we have been taught by sad experience, to
investigate for ourselves, the true nature and pa-
logy of diseases, and thereby burst the bonds wh-
have so long chained us ~~[illegible]~~ down to an-
opinions and sentiments. Instead therefore of
following servilely our predecessors step by steps, we
have been bold enough to think for ourselves an-
thus have been enabled to dispel some of those
thick clouds which obfuscated the true character of u-
science. let us no longer indulge in theoretical a-
-quisitions. but permit me to suggest that th-
Physician will be more successful, who unites
whole into one common mass, and although
be a "rudis indigestaque moles" he may by a

judicious selection deduce principles highly use
ful and important in practice: for I am confi
dent great evils arise from a servile attachment
to any single system of medicine. Pardon me for
this digression, I will return now to my subject
& endeavour to point out with as much perspi
cuity as I can, the morbid phenomena which take
place in Tetanus or Locked jaw. It has been divi
ded into several species or grades bearing different
appellations which were indicative only of certain
morbid phenomena that developed themselves in Tetanus
but Dr. Cullen in his Nosology has introduced a
greater multiplicity of terms by placing Trismus or Locked
jaw, as a genus distinct from Tetanus. All this
is conceived to be improper now and are applic
able only to different degrees of one and the same
disease. Hence we understand by Tetanus, all grades
of Tetanic affection, believing it to be unnecessary
to make any distinction, as all the different degrees
of violence proceed from the same causes.

The disease of which I am about to treat, is attended with a spasmodic contraction of the muscles, which are engaged in the elevation of the lower jaw, and which extends more or less according to circumstances to all the muscles destined to perform voluntary motion.

It sometimes comes on suddenly to a very violent degree, but more frequently it makes its approaches gradually while the patient being unacquainted with the nature and character of the disease, is not aware of the danger, until it has made considerable progress, and thus lets slip the favourable opportunity of obviating those symptoms, which afterwards often baffle the best directed efforts of the most learned and skillful of the Profession.

The patient for the most part, first begins to complain of a sense of stiffness and rigidity in the back part of the neck, which gradually increasing, renders the motion of the head difficult and painful. As these symptoms continue to advance, other marked sensations are felt in various parts of the body: there is a sense of pain

and uneasiness felt about the neighbourhood of the
tongue which after the lapse of a short time, indicates a dif-
ficulty of deglutition and at last a total interruption
of it. Indeed every attempt the patient makes to swallow
the muscular system is frequently more or less affected
with spasms.

While the rigidity of the neck and the spas-
modic contractions of the muscles continue to augment,
he may frequently feel a violent and acute
pain at the lower end of the sternum immediately
over the diaphragm, shooting from thence into the
neck and along the course of the spine, causing
sensations the most disagreeable and pains of the most
exquisite kind. As soon as the patient is attacked with
the distressing symptoms, the muscles of the neck and
particularly those of the back part of it, are attac-
ked with redoubled vigour, drawing the head and
trunk strongly backward. The muscles that pull
the lower jaw, which were particularly affe-
cted at the commencement of the disease,
are attacked now with more violent spasm-

and rigidity. thus the teeth are so closely shut to-
gether, as not to admit of the smallest opening. The
malady thus advances attacking sometimes one
part, then another shifting alternately from the
stomach to the lower jaw, and renewed with more
violence and pain, still pursuing its destructive course
and extending its baneful influence. it seizes on
the muscles along the course of the spine, bending the
trunk of the body backwards, and this state of
disease has been denominated opisthotonos.

But we have not generally the satisfaction
of seeing its deleterious effects cease here, for with great
velocity and deterioration of the living powers, it
propagates its influence both to the muscles of the
extremities and to those of the abdomen. the abdomen
the belly becomes hard and has been very emphatically
[illegible]
[illegible]
[illegible]

extensors, and depressors the head and trunk extended,
capable of being moved in any way, and it is to this
state the term of Tetanus has been strictly applied. There
are two other varieties or forms of Tetanus mentioned
by Authors viz Emprosthotonos, in which the body is
bent by the spasms forward, and Pleurosthotonos, in which
is inclined to one side, termed by Sauvages Tetanus Lateralis. Thus we see in this part of our description, spasms
succeeding spasms as closely follow clouds and gale
into storms. In short all the muscles destined to
perform voluntary motion are rendered incapable of
performing their functions with that regularity and
uniformity with which they are accustomed to do in
their natural and healthy state. At length
the patient being worn out by repeated attacks, which
seem to interrupt and disturb all the functions of his
body, is impeled by necessity to resign himself to his
fate, and under these universal and agonizing
spasms, his whole system is thrown into a violent
convulsive state of commotion or convulsive action, and
the hopeless patient can only find repose in the

ams of death. Before I relinquish the diagnosis of a
=plaint of symptoms by which this malady is charact
and distinguished from all other diseases, it becom
necessary to animadvert to the morbid changes
that take place in the arterial System and that
very important function of the animal economy
respiration.

According to the accounts of the most
=cient and observant writers. Tetanus is seldom ac
=ded with the common concomitants of fever: yet
when the spasms are general and violent, the pulse
becomes contracted, hurried and irregular, but on the
contrary when the system is exhonerated from those
spasmodic and convulsive commotions, the pulse
becomes more regular and composed and is an e
=vidence of the patient experiencing a considerable
remission of pain. The face generally grows pale
a cold sweat is perceived, but sometimes the pulse be
more full than natural and a warm sweat bre
out over the whole body. Although fever be not a
constant concomitant of the disease, yet it more

frequently supervenes in these cases arising from cold
or from wounds, and it has been said that inflam-
matory symptoms follow, but we have good reason to presume
such cases if any require bloodletting, as the blood has been
usually found on being drawn to be of a looser texture
than ordinary, and does not coagulate. The patient
then shows uneasiness and solicitude from the difficul-
ty with which he performs the office of respiration. It
comes like the pulse hurried and irregular, and cor-
responds in some degree to the disquietude of the patient
and malignity of the disease. Delirium seldom attends
in this disease, until towards the latter stages of it,
when every function of the system is more or less impaired.

Vomitings sometimes appear early in it, but they
do not generally continue long, for it is not an unfre-
quent occurrence for the appetite to continue to be
good through the whole course of the disease and the
process of digestion to be regularly carried on. A con-
stipation of the bowels very frequently occurs, but
whether it arises as a symptom of the disease

or the effect of a certain mode of treatment, is re-
-determined. A miliary eruption has appeared upon the s
in many instances, but I am disposed to consider this
merely an accidental circumstance.

Causes.

I shall proceed now to mention the
remote causes capable of producing Tetanus, and
I must premise that all those causes which have a
direct tendency to induce a great degree of debi
and prostration of strength may bring on the dise
Tetanus may arise from a variety of causes, b
general and local but I shall first mention th
that act generally upon the system such as cold
moisture, and when they are both operating at th
same time, are more apt to produce the disease by
-stracting the stimulus of caloric from the body
consequently establishing a predisposition in the sys
to disease by inducing debility and relaxation of
powers of life. It more frequently occurs

warm climates than in those that are considered
temperate, especially when aided by sudden transition
the weather from heat to cold. Hence the numer-
ous cases of Tetanus occuring in warm climates
among persons who are subjected to the action
of both cold and moisture at the same time in
consequence of being liable to much exposure
and fatigue.

Doctor Rush says that cold air
does certainly produce the disease if it be ap-
plied to the body in the form of a current and
further observes that the stiff neck which is
sometimes felt after exposure to a stream of cold
air from an open window, is a tendency to a
locked jaw or a feeble and partial Tetanus. Not-
withstanding Tetanus more frequently occurs in
warm climates than in cold, yet it may be brought
on by certain causes in any climate with which
we are acquainted, and I shall briefly mention
the most frequent.

The lacerations of nerves and tendons in many surgical operations, the fractures of limbs, tight shoes, the sting of certain insects or particular parts of the body, wounds, certain acrid substances taken into the alimentary canal and even the slightest abrasions of the cuticle are all capable of bringing on the disease under consideration. These wounds or injuries more certainly produce the disease if they have been preceded by the debilitating influence of warm weather, and more especially after such injuries of tendinous and ligamentous parts: and what appears to be very remarkable in Tetanus arising from wounds, that the wounded part very frequently heals long before the signs of Locked jaw appear, in many cases from five or six days, to two and even six weeks afterwards.

The cutting of the Navel string has no doubt very frequently produced the disease and more especially so when the system is influenced by local situation. For I think we have some ground to rest the opinion that local circumstances increase its mortality.

It is said to have occured as a symptom in certain cases, and it is said also to have been produced by certain emotions and passions of the mind, as terror, joy &c.

All these remote or predisposing causes to act by inducing preternatural debility and relaxation of the whole system. But they appear evidently to act primarily on the nervous system; hence the power the muscles being intimately connected and dependant on the nervous system, would appear to a superficial viewer to be the sole and primary organs affected, although in reality they are only diseased secondarily or consecutively. Again, all these remote causes act with more or less certainty and energy, in proportion the greater or less degree of susceptibility the system to take upon itself that peculiar kind of morbid action, and this susceptibility is rendered greater or less in the ratio of the degree of debility that

3

has preceded the operation of the remote or predisp
causes. The negroes in the west indies are said to
affected with this disease more frequently than the
te people, and this has been ascribed to the greate
irritability of their muscular systems and what go
in some degree to establish the verity of this assump
is the great mortality of Tetanus among the new borne
in some of the west india Islands, to which circumst
some agency may be imputed in the production of
disease, for we know that the irritability of childr
predominates over their sensibility. However notwith
ing this fact I rather suspect the exposure
fatigue and other causes which their situation in li
subjects them to, may conduce in some measure
their liability to the disease. Tetanus is not peculi
to the human species alone, but it affects Horses
kind in a similar manner. Doctor Rush men
the case of a pigeon that had it brought on

a wound in one of its wings, which appeared in
form of opisthotonos. Thus we see that we are not
the only subjects of this dreadful malady, but it even
sometimes visits the beasts in our pastures and the
birds that fly in the air.

Treatment

There is no disease in the consideration
which more difficulties occur, than that of which
we are now about to treat, whether we regard its
theory or its practical treatment, difficulties present
themselves equally embarassing on either hand. In conse-
quence of those embarassments we have been compel-
led in many instances of this as well as other dis-
eases to acknowledge the impotency of our art.
The want of uniform success in the management
of this disease has long been an important desi-
deratum among physicians.

No doubt their want of more frequent success m
be imputed to the indiscriminate use of the ~~remedies~~ sa
remedies in all cases, under a belief full of credulity
that certain medicines possesed a specific efficacy in the
cure of Tetanus. Opium has been considered as its ch
antidote, without recollecting that it was only one
out of a numerous lot of medicines, that are al
useful in it. Our prescriptions in this disease as well
as in every other, must be regulated according to
the nature of the disease and urgency of the sy
-ptoms, consequently the remedies must be a
-apted to the state and condition of the patien

It is of very little consequence w
-ther Tetanus proceeds from the lesion of a nerve
or tendon, or the pricking of a needle or pin in the
palm of the hand, the premonitory symptoms, w
in the general indicate the disease. The rigidity
of the neck, a bending forward of the body

to relieve the pain in the back, a constipation of the bowels, uneasiness about the epigastric region will for the most part point out very suspiciously the approaching danger. When the disease first begins to manifest itself by these premonitory symptoms, it might while in its weak and feeble state frequently be prevented by a timely exhibition of the proper medicines. An emetic, a strong dose of laudanum, the warm bath and a few doses of bark might possibly in many cases prevent the farther progress of the disease.

If it occur as a symptom of any kind of fever such medicines should be given as are generally made use of in that disease. Doctor Rush says, he once unlocked the jaws of a woman who was seized at the same time with a remitting fever, by an emetic and further observes that he cured several persons

laboring under this disease in whom it was the effect of an intermittent, by large doses of bark.

Doctor Jackson speaking of the intermitting fever of America, mentions rigid spasms resembling a perfect Tetanus as occupying the greatest part of some of the paroxysms, which symptom was finally relieved or suspended by the peruvian bark. If the disease arise from the sudden suppression of perspiration by means of cold, the warm bath and diaphoretic medicines would be indicated.

If it be the effect of acrid substances taken into the stomach or of worms in the alimentary canal, emetics, purges & anthelmintic medicines would be proper and should be made use of. But if the disease proceed from a wound or puncture, which is the most frequent cause, it should be dilated and afterwards inflammation induced, by acrid or stimulating substances

such as the common ley, spirits of turpentine, cantharides and if these are not capable of producing the desired effect which is sometimes the case, arising from the very great insensibility of the part, corrosive subl imate will produce a high degree of inflammation nd consequent suppuration when nothing else will.

This kind of practice appears not only be beneficial by experience, but by the dictates of ason and common sense. We speak thus, because he blood-vessels are manifestly in a state of reduce xcitement, this we know from the weak and feeble state of the pulse and dissolution of the lood when extracted from its containing vessels. Hence our immortal countryman Doctor Rush very discreetly remarks by stimulating the wound, we not only restore the natural excitement of the blood vessels, but we produce an infl ammatory diathesis in them which abstracts

the morbid accumulation of excitement from the
muscular system and by equalizing it, cures the d
= ease. I am aware of some objections being ma
to this practice by certain physicians in the west
indies, but their ill success was not owing t
any fault in the remedy, but to their misapplica
of it: for I think Doctor Rush, fully obviates th
objections, by stating the reason such a mode o
practice was not successful, is owing to the disp
= sition of the blood-vessels in those warm climate
to be hurried into a state of torpor and gangren
by the violent action of the above mentioned in
= tants. What ever might have been the result
of such practice in the west indies, experience
proves the utility and propriety of the practi
in the United States, for the verification of which
we need only refer to the practice of most ex
experienced physician.

When the patients are unable to swallow in consequence of the upper and lower teeth being clinched together, we are admonished to extract one or two teeth to open a passage for the introduction of our medicines into the throat, or if this cannot be effected, they should be injected by way of enemas.

But it sometimes happens that this morbid action continues after the causes by which the disease was produced are removed, and moreover some of the remote causes of this disease, are of such a nature that they cannot be removed by medicines. It follows of course that the old adage is absurd, Subtata causa tollitur effectus. For if we extract a nail from the sole of the foot, the effects will be very far from ceasing, yet where ever the cause can be removed, it should be done as soon as possible. —

When the disease still continues after the cause are removed, we must have recourse then to such medicines as are calculated to overcome by their sedative and stimulating power this spasmodic action of the muscles, and first of narcotics.

To overcome this morbid and convulsive action of the muscles, opium stands eminently high. It very truly merits many of the encomiums and panegyricks which it has received from the respective writers on the materia medica. Its efficacy in the cure of Tetanus has long been known, this we might have inferred from its antispasmodic as well as stimulating properties. That opium is a stimulus I infer from its effects upon the human system, both in health and in disease. Thus when given in small doses it increases the fullness and diminishes the frequency of the pulse.

if in large doses, inflammatory action is produced, hence its efficacy in the cure of this disease, is so great when properly managed that it has been considered an ipse agnicus, a cure of itself. Now this medicine stands higher in our estimation on account of its narcotic effects, for there is nothing in the practice of medicine that can give a physician a more exalted opinion of his profession than to have it in his power to calm the tumultuous system and tranquilize the agitations of the mind with sweet and placid slumbers. It should be given in large doses and frequently repeated, until it makes an impression upon the system, which impression should be kept up until the spasms are suspended, for the nervous system is rendered so insensible to the action of stimuli by the operation of the remote cause that small doses would have little or no effect.

This valuable medicine has been made use
as an external application in the form of lawban
to those parts which are most effected with spa
such as the face and neck and perhaps with som
advantage.

The datura stramonium another ar
-cle of the same class has been given in locked-ja
and I am disposed to attach more importance to i
than physicians do in general in the treatment
of this disease, and I am borne out in this opinion
the celebrated Doctor Stork and other German pra
-ners, who have passed many commendations up
its medicinal virtues, in maniacal, epileptic and oth
convulsive affections. Its efficacy in the treatmen
of such diseases, is farther attested by professor
Barton, who investigated the nature and propert
of plants, perhaps with more industry and su
-cess than any other man in this country, an
he esteems it as a medicine possessing gre

and invaluable powers. She has frequently exhibited it with success in cases of mania and hilipsy. From these considerations reasoning and logically I am disposed to believe it would have a most powerful effect in the treatment of Tetanic affections, and in my estimation stands among the first remedies. Like other medicines which have been exhibited in this disease it should be given in larger doses than ordinary, and perhaps its operation in overcoming spasm might be aided by conjoining it with some of the alkaline substances, as I believe they have been recommended in this disease.

The infusions of tobacco administered in the form of an enema have been used with success in Tetanus, they not only prove useful by producing an evacuation from the bowels, which are generally constipated, but from their antispasmodic powers occasion a relaxation of the violent

spasms so peculiarly characteristic of this disease.

Of Stimulants and antispasmodics.

Wine has been exhibited in this disease with the happiest effects. Many cases are recorded in which quarts and even gallons have been given daily with beneficial consequences. Neither have ardent spirits been found useless in it. This we might have inferred from the utility of wine and other similar articles corresponding with the stimulant properties of brandy. Doctor Rush mentions a case in New England who gave ardent spirits in such large quantities as to induce intoxication. Upon being asked his reason for this strange kind of practice, he said he always observed the jaw to fall in drunken men, and any thing that would produce that effect, he supposed to be proper in the locked-jaw. The peruvian bark has been made use of in this disease, and

advantages resulting from its exhibition will warrant its more extensive employment. — Indeed we have good reason to presume from the medicinal virtues of it, that it would have a powerful tendency to overcome spasm and excite more vigorous action in the blood vessels, and thereby take off a part of the preternatural excitement of the muscular system. Camphor, musk, the oil of amber and the whole round of stimulant and antispasmodics in the Materia Medica have been exhibited to patients labouring under Tetanic affections, no doubt with beneficial effects. Blisters have been recommended and they are generally applied to the back part of the neck or between the shoulders, although I believe it is a matter of little or no importance on what part of the body, they are placed, as the effects will be the same. They remove the spasms of the muscles, by exciting the

- actions of the sanguiferous system, in consequence of which the morbid excitement is translated or removed from the muscular system to the sanguiferous. While these effects are going on, the ill consequences that might result from the administration of the tincture of Cantharides, given in such quantities as are necessary have been such as to render the practioner highly culpable if he did not make use of it, at least, when other remedies failed.

Of bathing

The warm bath has been recommended with some degree of confidence to the world and in many instances, it has been attended with success in promoting perspiration and producing excitement in the blood-vessels. It is thus, it becomes one of the most efficient means when the disease arises from obstructed perspiration, but its indiscriminate use in all cases is in no wise warrantable.

The cold bath has been recommended also to our notice, as a very important remedy in the cure of Tetanus and supported by the result of much experience. But we have had many different statements of its good and bad effects so contradictory and unsatisfactory that it would be a difficult matter to determine whether it would be useful or prejudicial. Doctor Wright of Jamaica assures us that he has used it in many instances with the best effects, while on the contrary Doctor Gridlestone informs us it destroyed life in every case in which it was used in the East Indies. Now in my opinion, what ever might have been the result of Doctor Gridlestone's practice, the cold bath is a remedy of no inconsiderable degree of importance in the treatment of Locked-jaw, as it has a very great tendency to remove

debility, strengthen the muscular powers and give tone & vigour to the whole system. It prepares the system and renders it susceptible to the action of stimuli. In the east Indies, where the weather is so intensely warm as to induce a great degree of debility & prostration of strength, the affusions of cold water might prove a precarious remedy by extinguishing the powers of life before the good effects resulting from them could be produced and thus probably the cold bath may be injurious. This brings to my recollection the very sagacious observation of Doctor Rush "that proper remedies in their proper places & proper doses, constitute the perfection of Medicine. The last remedy which I think proper to mention and which is a very

important one when it effects the system in time, is Mercury. Among the numerous diseases in the cure of which, it has performed a very important and conspicuous part, the locked jaw stands as one of the number over which it has triumphed.

But the difficulty with which a salivation is brought on, is an objection so serious, that it has almost fallen into disuse although in testimony of its complete success, when a salivation could be excited, we might adduce many instances. To obviate this important objection we might resort to small but frequently repeated doses of corrosive sublimate which will no doubt produce the desired effect when no other preparation of Mercury will, as we have frequently been told by our respectable profession of the practice.

All these remedies have been made use of with more or less benefit in the treatment of Tetanus and should never be lost sight of.

For as the body becomes accustomed to the action of one medicine, we may have it in our power to make use of another thus giveing them alternately, and in this way we may frequently have the satisfaction of knowing that we have been the means of snatching many worthy and useful citizens from an untimely grave. While on the contrary if we should be so unfortunate as to lose any, we should always have the consolation to know, that we had done all that could be done, according to the present state of our knowledge.

Finis

An

Inaugural Dissertation

on Dyspepsia

Submitted to the examination of

Right Reverend James Kemp D. D. Provost,

and the Regents

of the

University of Maryland.

for the degree of Doctor of Physic

By James Harper

of Alexandria D. C.

March 24th 1817

To Dr Thomas Semmes
of Alexandria District of Columbia

Sir

I dedicate to you, this my production, not from form, or with the intention of bringing it before the public, but for the real esteem and friendship, which is due now as a friend, and the many indulgences owe you as a preceptor

I am Sir

With great esteem, &c

James Harper

Introduction

In preparing this production, it is not my wish to introduce to the world a new treatment, or to unfurl the many pages that have been written on the disease, but I have endeavoured to point out some of the opinions, and the practice of some of the most celebrated authors who have written on the disease. It may here be thought requisite, that I should apologize for this production, but suffice to say, that it was not a voluntary act of my own, but one demanded by the laws of the institution. —

Dyspepsia

This disease commonly called depraved digestion, is derived from bad, and Dyspepsia correct, the leading features of the disease are want of appetite; vomiting; flatulence; regurgitation; belching; heartburn; these symptoms generally concur with costiveness dependant of any disease of the stomach or other parts.

I shall first commence with the symptoms of the disease.
is disease like many others is accompanied with
numerous train of nervous symptoms; such as los
of appetite, nausea, sometimes vomiting, flatulency
olden and transient distensions of the stomach,
arthurn; acid eructations, gnawing in the stom-
ch when empty, pain in the side or breast; so
at the patient at times can only lie on his
ht side: great pain, costiveness, chillness, paleness
visage, debility, great unwillingness to exercise,
weness of spirits, vertigo, and disturbed sleep.
number of these symptoms varies in different cases;
me are only affected with part, while others are
ffected with additional ones, such as severe and
ransient pain in the head and breast with an
ffection of sight: but as dyspepsia is frequently
sympathic affection, so the above mentioned

mptoms are often joined with many others, and in
nsequence of this has rendered the description very
nfused and undetermined, under the general terms
Nervous Diseases or of chronic weakness. It is
ope however, and absolutely necessary to make
distinction in the diseases, as the symptoms enum
ted here are essential to the idiopathic affection
which, I am now about to treat. That there is a
linct disease which is generally attended with
greater part of the above mentioned symptoms,
re can be no kind of doubt. These symptoms
ay arise from one and the same cause, that is,
ility and a weaker action in the muscular fibres
the stomach; which is considered as the proximate
use of Dyspepsia. But the debility and con-
equent symptoms may depend on some organic
fection of the stomach itself; such as tumor

ulcer, or schirrous; or upon the effects of some disease communicated to the stomach, as in gout and amenorrhea. The dyspeptic symptoms in all such cases are to be considered as sympathic, and to be cured only by removing the primary disease. But I presume that the imbecility of the stomach does frequently arise independent of any the above mentioned diseases, or any more primary affections in the other parts of the body, and from the considerations of the remote causes, Dyspepsia is considered as an idiopathic disease. — Causes. —

Considering then, that the proximate cause of Dyspepsia depends on atony or debility of the muscular coats of the stomach, I shall next proceed to mention some of the remote causes of this disease: such as grief, uneasin

ness of mind, intense study, indolence, profuse
evacuations, exercise in excess, too frequent a
use of narcotics, as tobacco, opium, ardent
spirits, &c frequent surfeits, or immoderate repletion
ons of the stomach; rejection of great quantities
of saliva, or an interruption in the secretion of
bile, pancreatic, and gastric juices. Indigestion
is also produced by fear, as it produces pale-
ness and torpidity of the skin, and frequent-
ly occasions temporary indigestion in consequence
of the association of the vessels of the skin with
those of the stomach. — Diagnosis. —
Dyspepsia is very frequently combined with
hypochondriasm
obstructions, and in very different cases. It is these
different cases in which I wish to make a
distinction, and evidently of divers kinds. —
First. as it appears in young persons of both

sexes, in persons of a sanguine temperament, and of a flaccid and lax habit. Secondly as it occurs in elderly persons of both sexes, of a melancholic temperament, and of a strong and rigid habit. These two different states of the combination of dyspepsia and nervous disorders, I consider as distinct and different diseases, and chiefly to be discriminated by the temperament prevailing in the person affected. Thus having drawn a line of distinction between Dyspepsia and Hypochondriasis, I shall make a few more observations to elucidate and establish the distinction proposed. Hypochondriasis bears a great resemblance to the one now under consideration, Dyspepsia: but here is this difference between them, that the former appears at an advanced period of

life, and is an affection of the mind and not of the body, and when once it has taken place continues to increase as life advances; whereas the latter occurs from the age of puberty to that of thirty five and depends on debility, and is much mended as life advances to maturity It may likewise be distinguished from Dyspepsia by the imbecility, listlessness, want of resolution and activity, fear of death and suspicious disposition being always present, and by the absence Dyspeptic symptoms or when present, are in a much slighter degree.

Cure. Perhaps there is no disease the human system is more subject to than this, and one which ought to attract the attention of every student as he will frequently meet with it in the course of practice. Numerous opinions and

remedies have been given to us by different auth
ors who have treated of the disease; yet there
are few which deserve our attention. I shall
therefore endeavour in as concise a manner as
possible, to point out such remedies, as will
be most beneficial in removing this distressing
and troublesome malady. In the treatment of
this disease, there appears to be three indications
which ought to be particularly attended to.
First. To remove or obviate the remote cause.
Secondly. To correct the symptoms which ca
use to aggravate the disease. and Thirdly
To restore the tone of the muscular fibers of the
stomach. To accomplish the first intention, it
will be requisite for the physician to point
out to his patient the indispensable necessity
of forsaking such habits, as will have a

tendency to give rise to the disease, as the continuance of those pursuits, tends to destroy the salutary effects of the remedies employed. — But the execution is often very difficult, because men dislike to give up the pursuits of pleasure and renounce those habits which they have practiced with seeming impunity. If he leads a life of intemperance, he must forsake it and resort to temperance, sobriety, simple diet, moderate exercise, early rising, and a pleasing occupation, without which there can be no cure. — To accomplish the second intention is, To remove or correct the crudities, morbid acidity of the stomach, and costiveness. The first of these symptoms may be relieved by an emetic, such as ipecacuanah, antimonium tartarisatum, & the second by alkalies and

absorbents, such as aqua calcis, soap, magnesia and
chalk; the third and last by the use of gentle
laxatives joined with aromatics, for this purpose,
the Aloe Pil cum Myrrh grs x o in Pilulas iij pro
os. divid. is an elegable preperation. To accom
plish the third intention is, to restore the tone of
the stomach, and to doe this we should employ
such medicines as act directly on the organ, and
such as have a tendency to strengthen the sys-
tem generally. The medicines best calculated to
restore the tone of the stomach is the Peruvian
bark combined with aromatics, the mineral acids,
and chalybeates, such as the Tinct Ferri Muriat.
nulla x-xx ter die sumenda in quovis vehiculo.
is highly recommended. Chalybeates are often
employed in various forms, such as in mineral
waters and sumingly with success: but whether

this is owing to the chalybeate qualities or to the
means attending their use or some other circumstance
I shall not presume to determine; but the latter is,
I believe the received opinion.- If cardialgea, gas-
trodynea, or pyrosis, or any such concomitant symp-
toms should occur, they may be removed by
the oxyde of Bismuth which has been employed
with considerable advantage. The proportion
is from three to ten grains, with about twenty
five grains of gum tragacanth repeated three
times a day. But it will be better however to
begin with a dose of three grains, increasing it
gradually, the remedy is said to be perfectly
safe, as well as useful. To strengthen the sys-
tem, whereby the stomach may be benefited
the patient must take exercise on horse back
every morning, as it is preferable to walking,

being less fatiguing, he should breathe a pure,
dry, and wholesome air, rising early every morning, retir
soon to bed at night, lead a temperate life, partak
of food of a light nutritive nature, and frequently
the a cold bath. The diet of dyspeptic persons, ought
to be nutritive and generous, consisting chiefly of animal
food, on account of the vegetable disposition to acescency, to
be taken frequently, and in small quantities, no dilu
nt drink should be taken until some time after
ch meal, and when taken, ought never to exceed
half a pint, nor repeated oftener than once every
ee hours. A moderate use of wine may sometimes
e necessary, so as to assist digestion, but if it sh
uld become acid on the stomach, we must
bstitute brandy and water, but under no other
circumstances ought spirituous liquors to be used, as
o free a use of it, will produce a long train of nervous

symptoms, jaundice, dropsy, or consumption, and
soon terminate the existence of the patient.—

An

Inaugural Dissertation

on

Hydrocephalus Internus.

submitted to the examination of the

Right Reverend James Kemp

Provost,

and the Regents and Professors of the

University of Maryland,

for the degree of

Doctor of Medicine.

By

Henry F. Thornton

of

Caroline County

Virginia.

March 1817.

mon a cause of disease: We cannot account [illegible]

1.

On Hydrocephalus Internus.

In treating of Hydrocephalus Internus, which I propose as the subject of the following Essay, I shall not adopt the usual division of it into acute and chronic, and treat of each species under a different head, as is generally done by authors, but consider the latter as always the sequel to the former, and merely observing the application with respect to time. The propriety of the term Hydrocephalus Internus may with reason be questioned, as applied to the disease from its commencement; but as it has been almost universally adopted, I shall make use of the same term.

Dr Cullen in his Nosology places this disease in the class Neuroses, Order Comata. He calls it Apoplexia Hydrocephalica, and defines it to be an Apoplexy coming on by degrees, affecting infants and those who have not reached the age of puberty, first with lassitude, slight fever and headache, afterwards with slow pulse, dilatation of the pupil, and drowsiness.

His classification and description of the disease are equally unhappy. In the first place he is highly inconsistent in placing it at a distance from his febrile diseases, and at the same time telling us that it is attended with fever: and in the second, he has omitted some of the most essential symptoms.

Authors have generally stated two [illegible] of Hydrocephalus, 1st When the effusion takes place within the ventricles; 2d When between the Dura and Pia mater; [illegible] The term Hydrocephalus Internus was applied only to that species within the ventricles.

It has been divided into three stages, two before the secretion of fluid, and one after. The first stage is characterized by increased sensibility, quick pulse, intolerance of light, and other symptoms denoting an inflammation of the brain. A weak, slow and tense pulse, torpor, giddiness on raising the head, inability or unwillingness to sit up for a length of time, delirium, costiveness, and strabismus are the attendants on the second stage. An increase of all the symptoms of the second, together with paralysis, stertorous breathing, convulsions, subsultus tendinum, and a very rapid pulse mark the last and hopeless stage of Hydrocephalus generally.

Dr Cullen has told us that it confines its ravages to children and those under the age of puberty. Instances of its terminating fatally in those who have passed the meridian of life have have sometimes occurred. It is true that infants form the great mass of sufferers, and unfortunately, from an inability to communicate their sufferings, the disease is attended with a double fatality. Though even here a kind and beneficent providence has not left us wholly in the dark.

Sometimes it makes its approach slowly and insidiously, the inflammatory action being so weak that it can hardly be detected; at other times it attacks more violently, and soon completes its course. Peevishness and languor, without any particular complaint, loss of appetite, nausea and sometimes vomiting, costiveness, slight pains in the head, with a flushing of the face in the evening are generally its precursors, and give us notice of its approach. When the disease is confirmed, the patient complains of being chilly while the skin is hot, there is a constant and distressing headach; whenever the patient is taken from bed he cries till replaced on it; the light is hurtful to his eyes; the pupils are contracted, sometimes irregularly; in some the eye is a little inflamed, in others it is perfectly clear. The tongue is white. The stomach is early affected, and is extremely irritable; it rejects almost every thing that is swallowed, the appetite is lost, and there is but little thirst.

The bowels are generally costive, though they are sometimes loose — and when this is the case, the discharges are fetid, of a green colour, and attended with pain in the abdomen. The sleep is broken, and the patient on awaking starts and stares about as if frightened, grinds his teeth and picks his nose; and from these last symptoms it has been mistaken for worms. The pulse is very quick. In eight or ten days the inflammatory symptoms gradually abate. In some instances, especially where the progress has been rapid, the symptoms so far subside as to induce sanguine expectations of a speedy recovery. The disconsolate parents view with pleasure this flattering

flattering respite, and fondly hope in a short time to see the dear bond of their affection restored to health. Fatal delusion! This treacherous and momentary calm is but the too faithful harbinger of a speedy dissolution. It proceeds from an effusion of the distended vessels into the ventricles. They become in this way relieved, and the disease is suspended. In a short time the extraneous fluid acts as a re-exciting cause, and the disease returns with redoubled fury.

The symptoms of compression now come on; the vomiting ceases; the pulse is slow and irregular; on being raised to an erect posture the patient becomes giddy and wishes to lie down; the pupils dilate; the eye is less sensible, half closed, and upward, and deprived of half its vivacity by the film covering the Cornea; the patient frequently screams, becomes stupid, and with a hectic on his cheek we behold him saving the air with one hand, while the opposite side is palsied. Strabismus ensues, and vision is at length entirely lost. He frequently sighs; the pulse again becomes quick; the urine and feces are either retained or passed involuntarily; the breathing becomes stertorous; and the patient is hurried off in convulsions, or gradually sinks into the arms of death.

The convulsions arising in the last stage of this disease may be generally distinguished from those of other diseases. In Hydrocephalus, one side of the body is paralyzed, while the other is convulsed, and, in other diseases, the convulsions generally affect both sides equally.

We are not however to expect that these stages will follow each other in a regular succession; for children are sometimes suddenly seized with convulsions, by which they are carried off in a few days.

In very young children it not unfrequently happens that the disease runs through the first stage before we have acquainted ourselves with its true nature, and then there is very little hope of effecting a cure.

We are told by Mr Burns that it is to be dreaded when the infant has high fever, vomiting, costiveness, his appetite and apparently sick, with

with the eyes obstinately shut, dislikes the light, puts the hands frequently to the temples, has startings and spasms, awakes suddenly as if terrified, and sucks at first with great avidity. The diagnosis is however difficult, for all these symptoms may be produced by worms or obstinate constipation. Happily indeed, the diseases with which Hydrocephalus is apt to be confounded do not demand a treatment different from its own, and in every ambiguous case we are warranted in proceeding on the supposition of its existence. Whenever this disease has through inattention, or the inefficacy of our efforts to arrest its progress reached the second stage, a fatal termination may be expected.

Authors have generally fixed on the twenty first day for the fatal termination of this disease; but it is obvious that no certain rule can be laid down. Its duration is affected by the state of the patients health previous to the disease, and the violence of the attacks, both of which admit of many variations.

The remote causes of this disease are of two kinds: the first act through the medium of the system; the second immediately on the brain.

1st the remote causes acting upon the system, worms have been considered frequently to produce Hydrocephalus in irritable habits. As the want of experience prevents me from rejecting any thing in physick which comes within the limits of possibility, I feel myself bound to retain this among the causes, though I confess I think it by no means probable. They may debilitate the system, and render it so extremely irritable as easily to be acted on by other causes, and thus greatly contribute to the establishment of the disease - and this is as much as I am disposed to believe.

Dr Rush has told us that a stretching of the limbs might produce Hydrocephalus. He certainly would have had more advocates had he said it is symptomatick of it.

The Rheumatism sometimes produces it, especially when it attacks the head.

The Gout may bring it on. The Hooping Cough and Catarrh are frequent causes. By Rush we are told that it comes on in consequence of Pulmonary Consumption. It frequently follows most of the exanthemata, Scarlatina, Variola and Morbilli. It is produced by Erysipelas. Dentition is sometimes a cause of it. Pcora thrown into the system is a very frequent cause, as is also the healing of ulcers behind the ears or any where about the body. It is said sometimes to be a consequence of Typhus fever. It is hereditary, appearing in scrophulous families. Lastly Syphilis and chronick ulcers of the Dura Mater may produce it.

Of the second kind, or those which act immediately on the brain are blows on the head, falls from the nurse's arms, which in children is a very frequent cause. Rush has told us that falls on the feet may excite Hydrocephalus. It is certainly possible for the brain in this case to receive sufficient agitation to lay the foundation of it. Exposure to the suns rays has been known to produce Hydrocephalus, as well as Apoplexy and Phrenitis. These, so far as I am able to judge, are the only causes acting immediately on the brain.

The manner in which these causes act is plain, and admits of an easy explanation. The proximate cause is a debility of the vessels of the brain, or an affection of their vitality, which renders them incapable of carrying on the visual circulation; but the rest of the arterial system, and the heart, being unaffected, continue to push forward the blood with their accustomed force, in consequence of which the vessels of the brain are distended, and thus take on that action which is followed by a secretion of fluid. This constitutes the disease of which I am treating.

If the disease be very violent, and the inflammation great it is called Phrenitis; if the cause act so violently as to produce a rupture of any of the vessels, extravasation follows, and we have a true apoplexy.

If it be asked why the disease should fall on the brain in preference to

any other part of the system. I answer that nature and not the disease has made the election. Wherever the system is preternaturally weak, there will disease fix itself, as soon as the exciting causes are brought into action. For instance, [illegible] Pulmonary Consumption frequently follows an attack of Measles and so with other cases.

I have already given my views of the proximate cause of Hydrocephalus in speaking of the manner in which the causes producing it, act. It is the same with the opinion of Dr Rush, and that which he publickly taught his class about the time that Dr Cullen of Dublin gave it to the world in an Essay which he wrote on this disease. Both of these gentlemen are entitled to the credit of its origin.

While on the subject I shall introduce Dr Rush's opinion nearly in his own language. He says it appears that the disease in its first stage is a less degree of that inflammation which constitutes Phrenitis, and that its second is a less degree of that effusion which produces serous apoplexy in adults: and instead of its being considered as an idiopathick dropsy, it should be regarded as the effect of primary inflammation or congestion of blood in the vessels of the brain.

It may not be amiss to suggest here that all the cases of serous apoplexy, referred to by Dr Rush, and enumerated by other authors, were genuine cases of Hydrocephalus. They both arise from inflammation of the brain, are both the effect of secretion, and are both slow and gradual in their progress. This is the opinion of Professor Potter, and it is one to which I unhesitatingly subscribe. He considers Hydrocephalus as nothing more than the chronick state of an inflammation of the brain or membranes, or in other words, of Phrenitis

I cannot suppose the proximate cause of Hydrocephalus to be a torpor of the vessels of the Brain.

I should now proceed to give the treatment of the first stage, or acute hydrocephalus as it is generally called; but it will not be improper for me first to mention the chronick stage. This name has been used by writers to denote that stage of the disease which occurs subsequent to the secretion of fluid in the brain, and which is properly the only period of it deserving the name of Hydrocephalus. The term literally expresses a collection of water in the head - and to say there is Hydrocephalus when there is no fluid in the head, would be giving a name to a disease when its most distinguishing feature is absent.

If it be difficult to foresee the approach of the acute Hydrocephalus, where there is always some degree of inflammatory action to warn us of its presence, we shall find it still more difficult to ascertain when the chronick form is about to be established.

Children are sometimes born with it, the head being disfigured by a large tumor or cyst on the top. In others it seems to come on gradually from their birth; the child is dull, languid, and subject to frequent fits of stupor, or drowsiness, the head at the same time enlarging faster than the body. Some enjoy apparent health for some years, and are then taken with a loss of appetite, nausea and vomiting, are costive, and have their urine with difficulty. They have a slight fever, are amused for a short time with the entertainments of their age, but are soon tired with them; the bones of the head gradually recede from each other if the sutures be not united; and the veins on the scalp become very distinct. Muscular power is now greatly impaired, the body becomes emaciated and gradually wastes away. In this way the patient may live for months, and even years, commonly in a state of idiotism, the disease seeming to receive a check. Van Swieten says he saw a patient who had had it upwards of thirty years. However, it generally runs its tragick course in a much shorter time.

It appears sometimes to be hereditary, affecting many children of the same family. Scrophula predisposes to it.

Mr Burns says there is an affection of the head which is very apt to be taken for chronick Hydrocephalus, in which the person complains a long time of his head and neck, has the pain increased by exercise agitation or long reading, and sometimes he squints. This is however rheumatick, follows the course of rheumatism, is not constant, and changes its place. The squinting is not habitual, but is caused by the temporary affection of the muscles of the eye, and is increased by confining the eye for a long time to one object.

I have now said all that I think necessary on the two stages of Hydrocephalus generally mentioned by authors. It remains for me to give the cure. Before entering on the present improved method of treating Hydrocephalus, it may not be improper for me to note briefly that of the ancients. In doing this I shall go no farther back than the illustrious Boerhaave. At the time this able physician flourished no cases were considered as partaking of the nature of Hydrocephalus internus unless there was a gaping of the sutures of the head, and on this account it was only known among children. Whenever effusion took place in the ventricles of the brain, the case was looked upon by Boerhaave as hopeless. His mode of treatment was extremely inefficient, and without incurring the appellation of sceptick, we may doubt whether he ever had the good fortune to effect a single cure. With his accustomed brevity he has summed up all his remedies in a single paragraph. The internal application of the actual cautery holds the first place; trepanning and paracentesis of the brain come next; all equally murderous; hydragogues, corroborants and discutients close his catalogue.

Van Swieten, his learned and laborious commentator, condemns the practice of paracentesis, and says that it was uniformly followed by death.

He owns that he never succeeded in curing Hydrocephalus. His remedies are little more efficient than those of Boerhaave. Cataplasms of mustard or some other rubefacient, applied to the head, and purgatives constitute the sum of his practice.

Mercury was first used in this disease in the year 1775, by Dr Dobson. No important change in the treatment (so far as I am able to learn) took place previous to that period. Some years after this, Dr Quin published his treatise on the disease, which, with some little improvement, brings us to our present knowledge of it.

In the acute stage of Hydrocephalus, inflammatory action should be overcome as soon as possible. In order to effect this we must use the most powerful evacuants. The principal of these is bloodletting. When the patient is a little advanced in life, and of a plethoric habit, authors generally urge the necessity of early and repeated venesection; but if the patient be very young, this practice is denied. It is generally inculcated that he sinks under the loss of blood. It is said that owing to an extreme delicacy of constitution in Hydrocephalus, patients cannot bear any vigorous impression. This erroneous and mischievous doctrine is strongly opposed by the very able professor Chapman. I should feel myself wanting in respect to a faithful preceptor were I to omit here the outlines of his reasoning on the subject.

During the growth of the body, the fluids, and especially the blood, are greater in proportion to the solids than at any other period of life. The fullness of the vessels, and greater excitability of the system render persons at this time of life extremely liable to inflammatory affections. It follows therefore that they require frequent depletion. If the patient appears affected by the loss of blood, it is but of short duration.

When bleeding is practiced, it should be carried to such a length as to answer the intention of unloading the vessels of the brain. It has been

generally advised to take it from the jugular vein, or temporal artery, under the supposition that the vessels of the brain would be more immediately unloaded. On the justice of this conclusion there is still great diversity of opinion. When general bleeding is necessary, I would always consult my own convenience or that of the patient, as to the part from which it should be drawn. From whatever artery or vein you let blood it is all taken from the same systems of vessels, and the loss over the whole will be the same. After copious depletion in this way, blood may be drawn from the temples either by cupping or leeches. The quantity in every case must be governed by the strength of the patient, and the violence of the symptoms. In weak and irritable habits, where general bleeding is inadmissible, we must place our chief reliance upon topical bleeding.

After venesection we should not omit the immediate exhibition of cathartics, the power of which must be in proportion to the patient's strength. Mercurial cathartics are generally to be recommended, especially if the bowels be loose. When the patient is strong I should prefer Calomel combined with the supertartrate of potash. These diminish the volume of the blood by increasing the secretions. They should be frequently repeated (at least once every two days) as long as inflammatory action lasts. Along with the purgatives some have recommended Digitalis when the system would not bear the lancet.

Blisters at the same time should be used. The head should be shaved and a blister laid over the whole of it. If this should not give relief, as soon as it is taken off, it would be proper to apply one on the back of the neck and one on each temple; thus, alternating the places of their application, we should continue to make use of them until the disease is overcome or effusion take place. While we are employing the above remedies, the patient is to be kept in a cool room, the quiet

antiphlogistick regimen strictly attended to, all violent emotions of the mind avoided, and he should be kept in his bed with his head as much elevated as he can bear it. This position I must particularly insist on, as it both favours the descent of the blood and retards its ascent. If the patient have diarrhoea it is not to be too suddenly checked. It is on a treatment of this rigorous nature that we are to build our hopes of combating the disease in its infancy. A moment's delay of these active remedies may be attended with fatal consequences. At first it is sometimes in our power; afterwards, if not entirely without the reach of medicine, it is of so doubtful an issue that it must be ever approached with diffidence. The propriety of paying the strictest attention to the first stage cannot be too warmly urged when we consider carefully its consequences of our inattention. What must be the feelings of the physician, when he sees, through his neglect, youth beauty and talents snatched from the arms of the doating parent and laid in an untimely grave. If he be a man of feeling he can derive no consolation from the reflection that his neglect is concealed from every person but himself. The horrid image must forever haunt his distracted fancy.

By the most early and vigorous treatment we cannot always cure the patient, but by timely and unremitted exertions, we can obtain the consolation that we have done our duty.

When the disease has reached its second stage, the mode of treatment must be changed. Bleeding is not to be practised unless symptoms of considerable inflammation continue. Slight symptoms are better allayed by purgatives. It has been proposed to keep up a continued discharge from the head by blisters, and in this way to put a stop to the effusion. Issues in the head have been substituted for blisters, but they are found to be less efficacious.

it is better to draw fresh blisters than to keep them running by means of stimulating plasters. Stramonium has been said to cure the disease. I confess I cannot see in what way it could act so as to do any good.

Emetics in nauseating doses have been given also in this disease, with a view of causing an absorption of the effused fluid. I very much doubt whether this practice has ever been attended by any permanent good effects. They are said to be better adapted to the cases of those persons a little advanced in life.

It has been proposed to cure Hydrocephalus by Diuretics. They are no doubt done much good, and may be used with advantage. Digitalis appears to be the best medicine in this Class.

Enemas have been given with the expectation of arresting the disease by producing a copious discharge. Of themselves they are entirely inadequate to the cure; but as some benefit may be derived from their exhibition, and as they do not interfere with the employment of any other remedy, they should not be overlooked.

Slight electrick shocks passed through the head twice a day have been said to be of essential service in some cases depending on debility.

The disease has been treated with drastick purgatives administered once every two or three days as the strength of the patient would admit, and like every other mode of treatment favourable reports have been made of it. The bowels should be kept open by mild and gentle cathartics, as I have elsewhere advised.

I have before had occasion to state the mercury was first used in the cure of this disease, by Dr Dobson, in 1775. He gave it internally. Dr Percival used it in 1777. in the form of unction. With respect to the propriety of using mercury, authors of celebrity are much

variance. some think it the only dependance, while others consider it always injurious. This diversity of opinion may depend in a great measure on the mode of administering it. I am inclined to believe that dealing it out with too sparing a hand has been the principal cause of its failure. Properly used it is the only anchor of hope; improperly, its powers are feeble. The proper manner of using it is by friction: and in this way it is to be used without regard to quantity. The patient should be frequently rubbed, and the bed clothes and linen well greased with the ointment. It is very difficult to produce ptyalism in a child, therefore the strongest ointment should be employed. The patient should be confined to one room, and as much as possible to the bed, until salivation takes place: he must be narrowly watched, and as soon as the slightest salivation is perceived, he should be immediately washed clean, clothed in fresh linen, and removed to another room. If the salivation be very profuse, and the patient much exhausted, it may be proper to support the system by means of mild tonics. In order to give him every possible chance of recovery, during this course it would be well to exhibit Digitalis in small doses.

The internal exhibition of mercury is said sometimes to cause a discharge from the nose, and sweating of the head, which are considered vicarious discharges, and are to be encouraged. Exhibited in this way it affects the bowels too easily to admit of its being given in sufficient doses to produce a speedy salivation. We are told by Mr Burns that in a case attended by his brother, he succeeded so far with mercury and Digitalis as to relax the fontanelle slack, which had before been tense; but every time this was effected, the patient had convulsions, and finally

is of them. His practice is certainly worthy of imitation and could be resorted to where from any circumstances the ointment must not be used.

Whenever convulsions supervene during this disease, opiates should be administered, which render their occurrence less frequent, and thus diminish the distress which such symptoms never fail to excite. When the pain of the head is very distressing, it may be relieved sometimes by application to the part of cloths dipped in cold water, or water and vinegar. Blisters are never to be removed on account of these palliatives. I have now completed a detail of the various remedies which have been proposed and put in practice in this disease. I have spoken last of those from which I believe most benefit will be derived, and which I should employ were a patient entrusted to my care. It remains for me to point out the steps necessary to be taken in order to prevent this disease in those who appear predisposed to it.

Worms should be kept behind the ears or on the back of the neck by those who are fearful of the disease. We should carefully regulate food diseases which are said to produce it, particularly the Exanthemata. Purges should be given frequently. A change of climate is highly necessary. The general health should be particularly attended to. Any pain in the head with slight fever should be strictly observed. Indeed in all the diseases of children it is necessary to attend to the head; and whenever symptoms appear indicating an affection of the brain, we should have recourse to the applications of leeches, blisters and other means which have been pointed out. In all protracted diseases of children, especially attended with much fever, it will be proper to shave the head and apply a small blister. Whenever a cathartick is given by way of prevention, a mercurial one is preferable.

An

Inaugural Dissertation

On

Hydrocephalus Internus

Submitted to the

Consideration of the

Right Revd James Kemp D. D. Provost

and the

Regents of the University of Maryland

for the

Degree of Doctor of Medicine

by Henry T. Bond of

Harford County. Anno Domini 1817

Introduction

As introductions are customary to essays in the process of graduation I am led to follow the example of those who have preceded me not with a view, to speak of the merits of this essay, but more as an apology for its imperfections.

As it has become fashionable to graduate in the course of two or three years reading, little original can be expected in so short a space of time. Suffice it to say, in my opinion that wandering through the meanders of Medical Science so far as it has extended, is quite sufficient to the time allotted. But as it is a law of this University, that candidates for the degree of Doctor of Medicine, shall write on some subject pertaining to the Science of Medicine.

I have selected Hydrocephalus as the subject of my dissertation, having had an opportunity of seeing several cases of this insidious disease; I was disposed to select and condense in a short thesis, such opinions relative to its nature causes and cure, as appeared to accord with true and successful practice.

Much rather had I glided through the process of graduation in obscurity, than present to your consideration my immature thoughts on this subject, but relying upon the exalted sentiments of scientific men, I more willingly submit this essay to your respective examination. Believing that the weak spots will be less lightly upon it, being an emanation from the pen of

who has jest laid the basis upon which he is to erect his future superstructure.

History of the disease

This disease appears to have been noticed by some of the earliest writers on medicine, Hippocrites who has been stiled one of the fathers of physic, speaks of the presence of water between the cranium and duramater. Boerhaave and Celsus have also noticed this affection, but in such a desultory manner as not to admit of any extracts. Hyeronymus Mercurialis who wrote about the sixteenth century appears to have understood the nature of this disease more correctly than any antecedent to his time, But we must necessarily conclude that his knowledge was slight,

from his adding that appoplexy must always be the consequence. Wepfer appears to have had some faint knowledge of this affection, from dissecting, in several of which was found a collection of water in some of the cavities of the brain.

It has also been treated of by Mr. Petit in the memoirs of the academy of sciences of Paris. He has attempted a history of the symptoms of this disease and doubtless with more success than any of his predecessors. But it was not until the publication of a posthumous essay of Doctor Whytt professor of medicine at Edinburgh in seventeen hundred and sixty eight, that a well connected history of the symptoms attendant on a collection of water in the

ventricles of the brain was arranged with perspicuity. After this publication Doctor Fothergil who had observed most of the peculiarities attending this disease, read a paper on the subject, but differing a little from the view taken of it by Doctor Whyt.

Put fortunately for a student of medicine Charles Quin of Edinburgh in seventeen hundred and seventy nine pointed out the inflammatory nature of this effect=ion which precedes the morbid secretion or effusion of water, from this Doctor Cullen being convinced of the nature of the disease in seventeen hundred and eighty, when he republished his nosologia methodica removed it from the dropsyes and transfered it to the appoplexies with

the name epithet of apoplexy a Hydrocephalus. Doctor Rush viewing the disease in the same light of Doctor Cullen considered it inflammatory in its commencement, called it Phrenicula supposing it to be a diminutive species or genus of phrenitis, and accordingly the major part of succeeding Physicians have generally embraced it as the correct pathology of the disease.

Symptoms

Physicians have ever had the great difficulty of positing out a distinct and complete history of the symptoms attending this affection, in consequence of it being not unfrequently confounded with other diseases, especially

those of the abdominal viscera, which dif=ficulty must preclude all hope of a more successful attempt in this essay.

Doctor Cheyne one of the latest writers on this disease, has described three different forms in which it appeared in different instances which fell under his direction. And Doctor Kuhn makes a similar division of the varieties of this for the most part fatal affection, first when the disease is slow in unfolding its phenomena, secondly when the attack is sudden and progresses rapidly, thirdly when it supervenes upon the disappearance of some previous indisposition, these distinctions however only indicate the commencement of its attack, as the appearances differ but little in the latter stages of the disease.

This disease attacks generally children, but some times adults as has been sufficient=ly demonstrated by Doctor Rush. It has generally been distinguished into three stages, and correctly as characterized by the eye & pulse.

The patient in the first stage appears languid and disposed to sleep interrupted slumbers, anorexia, fretful, pain of the head, attended with a sense of heaviness, vomiting not unfrequently takes place upon rising after sleep; After the continuance of the above symptoms a short time, the phenome=na of this affection appears more formidable; the pulse is frequent and irregular, the face is flush,

the tongue white, the eyes very sensible
to the rays of light, grinding of teeth,
and frequently picks the nose, which induces
the patient to refer it to the existence of
worms, to the great detriment of the inno-
cent sufferer. Delirium now comes on
with all the preceding symptoms of fever
which continues a few days.

The disease then changes to that
stage which has been denominated the second
the pulse now became slow and unequal,
the pain of the head which was severe
in the first stage abate considerably,
the restlessness and interrupted slumbers
are succeeded by an almost lethargic
torpor, the eyes which were very sensible
to the rays of light in the commencement

Are now almost insensible, attended with a considerable, dilatation of the pupils, also a strabismus or squinting, the patient also frequently lies with one eye open; and generally is found insensible to light, the bowels are at this time obstinately consterpated whatever is offered whether food or medicine is swallowed with voracity.

The disease may continue under this form some days, subject as it always is to great variation, when the above state is superceeded by the febrile again the pulse so frequent and irregular as to be numbered with the greatest difficulty, the skin is hot and dry, the cheeks for the most part are attended with

a circumscribed red spot, the pupils much dila-
ted, vision double or entirely obstructed, one side
frequently becomes paralytic, and a continual
moving of the opposite arm, the conjunctiva
of one or both eyes frequently suffused with blood.
Coma and convulsions now
succeed attended with the paralysis of one
side, deglutition is performed with difficulty
the breath also offensive to the smell, the
bowels which were obstinately costive in the
commencement are now the reverse, the
urine and faeces pass off involuntary, lastly
respiration becomes difficult frequent and
stertorous, nearly resembling the apoplectic
stertor, and finally the afflicting catastro-
phe is generally terminated by convulsions.

A considerable diversity of opinion prevails

among physicians relative to the duration of this disease; and the great difficulty of drawing a portrait sufficiently characteristic of this affection, has induced Doctor Cullen to call it truly protiform distemper. Doctor Whytt supposed it to continue generally from four to six weeks. Doctor Fothergil supposes that the continuance of the disease does not generally exceed three weeks. and from the observations of succeeding writers, the observation of Doctor Fothergil appears to be corroborated, but like other diseases of the brain, Hydrocephalus appears in its duration very uncertain. in the case which I had an opportunity of seeing in which many of the above symptoms were exemplified, the continuance

was about seventeen days from the commencement of attendence, which commenced in the early part of the disease, & it was excited by a fall. Having concluded the history and symptoms of this disease, it will not be amiss to make some observations on the appearances exhibited upon dissection.

Appearances on Dissection.

The appearance which was first noticed upon the dissection of persons who died with Hydrocephalus Internus, was the almost invariable appearance of a limpid watery fluid distending the ventricles of the brain, amounting in some instances to the quantity of four or six ounces, in some only one of the ventricles has been found distended also a small quantity has been found surrounding the membranes of the brain, particularly under the tunica arachnoidea above and below

the basis of the brain. The water taken from the cavities in Hydrocephalus differs from the serum of the blood, the watery fluid surrounding the heart in the pericardium

in consequence of its not coagulating by the application of heat.

In addition to the preceding appearances, later writers have observed congestions in the blood vessels of the brain, and visible marks of inflammation. Doctor Cheyne observes that upon dissection we generally find within the cranium the veins particularly those of the membranes on the surface of the brain and lining of the ventricles gorged with blood. Sometimes considerable adhesions between and thickening of the membranes

and minute and florid vessels upon the surface of the pia mater. Doctor Dunn also relates several cases which gave evident indications of an increased quantity of blood contained within the vessels of the brain.

In all, the vessels were remarkably turgid demonstrating plainly, that inflamma=tion had existed. Independant of the morbid appearances of the brain above related, Doctor Cheyne observes that the abdominal viscera are frequently affected in this disease, he observes

I have found the intestines inflamed and constricted from spasm, and the surface of the liver of a bright colour, abounding in minute vessels, and sometimes extensively adhering to the peritonium. Again he observes I have found in the liver great remains of inflammation, and also proofs that undue irritation had existed in the alimentary canal.

Diagnosis

Having thus taken a brief view of the most prominent phenomena of Hydrocephalus Internus as stated by medical writers and witnessed by myself, ~~it being~~ as it is of such a hidden nature in its commencement, it is sufficiently obvious how necessary it is to point out the diagnostic signs of this disease, knowing that the successful efforts of the physician depends so much upon the early and prompt application of such means as his art affords him.

The disease with which Hydrocephalus in its commencement is most generally confounded, is that disease affecting children denominated by Doctor Butler the infantile remitting fever. This disease has many symptoms which appear to simulate very nearly the commencement of

Hydrocephalus, but the remissions are more regular and of shorter duration. Hydrocephalus is more gradual in its commencement, the stomach is also more affected, particularly the frequent vomiting after sleep, the pain of the head also so great as frequently to awake the patient from a doze, the eyes are also very sensible to the rays of light, in children somewhat advanced in age, the countenance exhibits a peculiar stare, with the appearance of much anxiety. In the remitting fever of Doctor Butter the head is not materially affected, the remissions are also more regular and complete, the alvine evacuations are very analogous in this disease to patients labouring under Hydrocephalus being of a dark brown or muddy appearance. The ~~xxx~~ next disease with which Hydrocephalus may be confounded is that peculiar secretion of the liver termed atrobilis-

But the distinction may be easily drawn after the administration of a brisk cathartic the symptoms consequential upon the latter disappearing.

The irritation of dentition and worms in the alimentary canal have also been mentioned as somewhat similar in their phenomena to the commencement of Hydrocephalus, but I am disposed to believe that with proper attention the difference may be easily ascertained.

Predisposing Causes

The subject of predisposing causes, may I think with strict propriety, be divided into two, as giving origin to this disease. First such as are acquired hereditarily and secondly through the general system.

of the first.

It has been justly observed by the professor of the theory and practice of physic of the University of Maryland, That every child brings into the world certain predisposi=tions or predisposition, that is the capacity of one or more parts being less able to resist the influence of morbid causes than others, this consequently derived from their parents. it being very evident that predispositions to certain diseases may be transmitted hereditarily though no such disease had existed previously in either of the parents.

And also I am disposed to conclude with him, that more diseases are hereditarily communicated than stated by medical writers, believing that the nature and constitution of children agree more or less with that of their parents. ~~HHHH HH~~ a predisposition to this disease may be

generally traced to that peculiarity of constitution allied to scrophula, the opinion relative to this strumous predisposition to Hydrocephalus appears to be corroborated by the following observations of Doctor Cheyne; he observes "he attended two families in one four died and in the other three; he also observes that he heard of one family out of which seven died with this disease, in which patients the scrophulous predisposition was evidently characterized."

Swayne in his nosology methodical makes an observation corroborating the above, he says novi familiam, cujus infantes circa sextum ætatis annum omnes pene ex hoc morbo, scrophulæ huic effusioni ansam præbente.

Of the second division, as giving origin to Hydrocephalic

predisposition, may be ranked febrile diseases of different kinds, such as the exanthemata bilious remitting and intermitting fever, obstinate cases of catarrh, and cholera infantum which by exerting their influence upon the system for sometime, destroy the natural and equable balance existing in the different parts composing the body; consequently laying the predisposition to certain diseases, and from the frequent supervening of Hydrocephalus upon the disappearance of these affections I think we are justifiable in viewing them as predisposing causes.

The Exciting Causes of this disease may be referred to such accidents as children are subject to in their juvenile excursions, such as violent exercise, falls, blows, and strong emotions of the mind in adults by producing

such a disarray as to prevent the vessels of the brain from applying the blood to their proper and healthy economy.

The Proximate Cause of Hydrocephalus like that of many other diseases has been viewed differently by different authors. Doctor Whytt and Fothergil viewed the disease as a mere dropsical effusion into the cavities of the brain similar in its nature and cause to ordinary dropsy. Doctor Quin took a different view of the disease and drew a line of demarcation sufficiently obvious, between chronic and acute Hydrocephalus, he is of opinion that the peculiar symptoms of this disease is not to be attributed so much to effusion as to the accumulation of blood in the vessels of the brain, which

produces a degree of inflammation that is gener=ally succeded by a watery Suction effusion. Doctor Cheyne adopts an opinion very analogous, he observes that in this disease there is produced a venous conges=tion, in addition to and probably arising from an increased arterial action, that the effusion of this serous fluid arises from the venous congestion, that this effusion has a tendency to counteract the baleful effects of increased action, and to retard the fatal termination of the disease, of course that the effusion into the ventricals is not the cause of the violent symptoms, and that the increased action though perhaps varied does not cease when the congestion and effusion have taken place. These are the principal opinions that have been offered relative to the nature and causes of Hydrocephalus.

But I am disposed to consider it a consequence of that grade of phrenitis termed by Doctor Rush phrenicula, and would explain it upon the theory of inflammation advanced by Doctors Lubbock & Allen, that is any cause having a tendency to weaken the smaller vessels consequently destroying the balance of power naturally existing between the smaller and larger arteries. In consequence of this debility and diminished resistance, the (vis a tergo) overcoming the systolic power of smaller arteries they become distended with blood, consequently throwing out this watery fluid, present to us the phenomena of Hydrocephalus.

Prognosis

The prognosis in this disease is for the most part unfavourable, from the nature of

the parts concerned and the great tendency to effusion in this affection, it is a difficult matter to give a favourable prognostic Never in the first stage, in the second is generally unfavourable, and in the third it is almost invariably hopeless.

Doctor Why considered it a more fatal disease than subsequent experience has exemplified, he pronounced it fatal under all circumstances and confess that he never succeeded in effecting a cure in a single instance, Doctor Willan however mentions three cases that terminated in health out of eight: two about the eighteenth day of the disease and the third and instant at the expiration of the fifth week. Several cases are also related in the medical observations and inquiries Vol. iv. and vol. vj also a case in the Edinburgh medical communications vol. x page 299 and Doctor Quins essay page 73. —

Doctor Rhyne has observed that a great increase of urine may be depended upon as a favourable prognostic especialaly after the administration of mercury. A copious diaphoresis may also be viewed as a favourable prognostic. Having thus taken a cursory view of the different opinions and various phenomena of Hydrocephalus it remains to say something of the means to effect a cure.

Treatment

In a disease like this which from its commencement is of the most dangerous nature it is sufficiently obvious that the physician should concentrate his forces while in its embryo state, and from the light I am disposed to view it in sufficiently substantiated by the observations of Doctors Dunn and Rush the antiphlogistic plan is

the one to be adopted, under this head I shall commence with cathartics one of the whole routine I am disposed to consider the mercurial the most efficacious. More especially we should commence with cathartics as we know that the brain sympathyzing with the a morbid state of the abdominal viscera frequently present to us many of the phenomena of Hydrocephalus, if we mistake the seat of the disease in the abdomen for the brain we may congratulate ourselves upon having resorted to one of the most efficacious means and vice versa the next remedy that demands our consideration is blood letting from the acknowledged efficacy of venesection in subduing inflammation it should be viewed as the sine qua non in the cure of this disease, even to as great and greater extent according to Doctor Rush than in phrenitis — except in very young children.

In addition to the above mentioned remedies the abstraction of heat has been suggested and probably with much propriety, from its tendency to increases excitement there is little doubt but that its diminution would be attended with the best consequences, this indication may be fulfilled by ice and other cold applications such as those of the refrigerant class.

Blisters have also been much employed in this disease even in the commencement, believing that the discharge they produce would counterbalance their irritating effects, this practice however is considered somewhat ambiguous, and would always procure their application by depletion.

The preparations of mercury have also been employed with the object of

causing the lymphatics to such a degree as to remove the effused fluid, though this power of the absorbents has been denied by some, supposing the matter too gross to be removed by such delicate instruments as they exist in the brain. But on the contrary we have instances where upon dissection a considerable portion of the brain has been removed. By what agency unless by the instrumentality of absorbents, if we admit their power of removing the brain, we are disposed to admit their agency in removing this effusion, and consider this disease as a proper instance for its administration continued so long as to produce a complete ptyalism.

Finis

An

Inaugural Essay

upon the Modus operandi of Medicines.

submitted to the examination of the

Right Reverend James Kemp.

Provost.

and the Medical Professors of the

University of Maryland.

for the degree of

Doctor of Medicine.

By Lennox Birckhead

of Baltimore.

April 1817.

Introduction.

A sense of the difficulty inherent in the subject and a conscious deficiency urge the propriety of some prefatory remark in extenuation of the poverty of this essay. Already the generous and enlightened mind anticipates literary inexperience and a difficult subject as the apology.

Although poor, this essay has little claim to originality: it is constituted of foreign opinions, together with hints picked up from books or professors, and merely expanded into sentiment.

Let it not be supposed that this confession is prompted by a trifling affectation of honesty. It springs from that spirit of independence, so natural to all, which disdains the lustre of borrowed plumage.— But I forbear.— There is a security from the charge of plagiarism glaring to the dimmest vision.

An Essay
on the
Modus operandi of Medicines.

If a correct opinion can be inferred from the darkness which long involved this subject, the medical world seems to have been more industrious in the discovery of new medicines, than in the explanation of those already in their possession. That it has not met with the attention due to its importance, even in the present improved state of our science, is evident from the combination of articles opposite in their character, and the unintelligible explanations relative to their effects.

At first view it may appear unimportant to a practitioner to know the manner in which a medicine acts provided he is acquainted that certain medicines will produce certain effects. Let us see what can be urged against this remark.

When we know upon what principle a medicine acts, we then have data upon which to build our speculations, with respect to other articles. Thus if we knew how mercury eliminates from the system the syphilitick virus, possibly we should not be confined to an individual article, so injurious in some habits, and so inert in others. That this ignorance is not merely negatively injurious, one fact will prove. A Gentleman, distinguished for science, after expatiating upon the diaphoreticke virtue of nitre, observed that it was extremely nauseous but that might be corrected by an aromaticke, thus

extinguishing at once its greatest virtue—

The knowledge here recommended, strikes at the very life of specifics, the great injury of which is tying down the physician to a single article, when many present. Polygala Senega has acquired the reputation of a specific in the cure of Croup, acting by a counter irritation upon the fauces and a peculiar stimulus upon the vessels of the lungs. I am disposed to suspect the modus operandi here given, and also to question the claims of this article to be distinguished from other general evacuants, as a specific. After its stimulant effect is over, it excites a great degree of nausea, perspiration, vomiting, and catharsis; here we have every thing necessary for repressing the action of the heart, and overcoming febrile symptoms. Then there can be no necessity for referring its effects to any specific action. A compound could be proposed possessing all the boasted efficacy of Polygala. We have also seen the ergot celebrated for its great power in facilitating parturition, and physicians seem already, in their imaginations, to have repealed that melancholy decree, which dooms woman in pain and labour to bring forth; but a fair and judicious examination of its character has thrown it from its elevation, and degraded it to the level of a drastick cathartick, not friendly but inimical to woman kind. This whilst it shows the folly of attempting to correct necessary evil, establishes the propriety of attending to the operation of medicines. But a medical man who aspires to an elevation above that of a mere empirical practitioner no further argument can be necessary to prove the propriety of making the modus operandi of

medicines a subject of investigation.

Without proceeding further it will not be thought irrelevant to notice one of the most prominent circumstances which modify the operation of medicines. The man who would undertake the cure of disease without attending to these circumstances, would be as unfortunate as the physician who would practice without adverting to the accidents of constitution, habit, season and climate, which give to disease its various forms.

There is no fact in medicine better established than this, that the animal system has the capacity of accommodating itself to poisons the most virulent, when gradually applied. Thus it has been remarked that those persons who come directly from the country to the city were more liable to the yellow fever than the inhabitants, not as has been usually supposed, because the country folks had more oxygen in their blood, but because they had been without the sphere of the city atmosphere and of course had not the shield of habit. But can this knowledge be of no service to us in the practice of medicine? Does it not suggest the propriety of an occasional change, when we have more than one medicine of the same character, and when we have but one, a continual increase of dose, or a temporary suspension? Are we not told that an unguarded use of mercury often occasions a failure in the cure of Syphilis? Will not this furnish a reason for the failure of bark in the cure of intermittents, when some tonick of inferiour virtue, but which is a stranger to the system finishes the business and supplants in unthinking minds this noble medicine?

Another circumstance is Idiosyncracy. What constitutes this peculiarity I cannot pretend to say; the fact will explain the different reports we have occasionally of the operation of the same medicine upon different persons: this fact should inspire a cautious administration of violent medicines: it teaches us that an individual case should neither give, nor take away reputation from a medicine. In tetanus sometimes opium succeeds, sometimes amputation, sometimes simply making an incision, and then again, sometimes the disease triumphs over all. This irregularity, depending upon peculiarity of disease, or idiosyncracy, should induce us to try everything by that has ever succeeded, notwithstanding its repeated failure in our hands.

Perhaps the modifying circumstance of most importance is disease, by attending to which, a practice more energetick and successful has been adopted. The quantity of wine and opium used in certain stages of the system, when the sensibility has fallen very low, to one who has only contemplated the systems in health, would be truly astonishing. The occasional insensibility of the stomach and torpor of the bowels, has not failed of remark from the most vulgar minds.

Having taken a cursory view of the most prominent circumstances which modify the operation of medicines, I will proceed more immediately to the subject of discussion.

It has been insisted by some that certain medicines are taken up into the circulation, and therefore may be supposed to act by being conveyed with the current of blood, to particular organs. Perhaps the support of this

pinion is at first view specious and imposing, for it is asserted that the peculiar odour and colour of certain articles are discovered in the different secretions, in the urine, and in the echalation from the lungs and skin; but may not the colouring and aromatick principles, disjunct from the medical, become connected with the nutrient particles by an affinity superior in resistance to the separating power of the digestive organs? But admitting some of the principles, nay even that the whole Materia Medica is occasionally discovered in the urine, still there is a process of reasoning which may preclude the inference that they have passed through the kidney by secretion. Darwin long ago insists that there was a passage to the bladder independant of the kidneys, and whether we admit his explanation by retrograde absorption or not, there is at least some ground for the opinion. How else can we account for the immense and sudden discharge of fluid in dropsy? Can it be by the kidney? We should suppose that the secretion would go on the more actively, the more vigorous and healthy was the circulation, but we find this immense evacuation taking place under the influence of nauseating medicines and depressing passions. Here I may anticipate an objection. Perhaps it may be urged that the secretion of urine is not in proportion to the healthy vigour of the circulation, for under the influence of fear there is often a sudden discharge of urine. But this is merely the fluid already secreted and the relaxation of the sphincter in common with the whole body permits the fluid to pass off. This is proved by the fact, that you may apply your depressing cause as long as you please and no more urine after the first discharge will flow. Perhaps analogies may

e found favourable to the opinion here countenanced. The fluid of dropsy as been evacuated by the stomach and uterus: here there was no intervening organ like the kidney: how it was conducted to these organs, I cannot presume to explain, but I suppose the fluid of dropsy may get to the bladder in the same way, and if so there must be a passage independent of the kidney. Then we will not admit as proof, that because the colouring and aromatick principles, even the whole materia medicina, is occasionally discovered in the urine, that medicines are taken up by the lacteals, and produce their effect by being carried into the circulation.

In order that these medicines should produce their effect, their particles must be concentrated and by a law directed to the diseased point or particular organ, for their minute quantity precludes the possibility of their acting with efficacy when diffused through the whole mass of blood. It may be averred that all these objections will not apply to mercury, because it has been found in different parts of the body; perhaps mercury is always absorbed but the rarity of these cases is an objection.

That mercury does not produce its effects by being absorbed there is some ground for believing; the small quantity of the article and the rapidity with which a salivation has succeeded is an objection. Moreover when calomel has been rubbed upon the gums with the view of translating the disease to the salivary glands no immediate effect has been produced. Now surely if a salivation is produced by direct application of the mercury we should have had immediately profuse ptyalism.

Upon what principle mercury acts I cannot pretend to say; it appears

to give a vigour to the system, superiour in its resistance to the powers of the syphilitick virus. In inflammation when given in long doses it is said to do wonders. Perhaps it may impart tone to the debilitated point whilst it wastes the whole system, or it may relieve by the permanent nausea and exhalation which it excites; however I cannot hazard an opinion where all is doubt and uncertainty.

It may be asked if we do not admit our medicines to be absorbed how can their operation be explained, and here is experienced the common complaint, that is more easy to destroy than erect an hypothesis. However there are some facts which go to prove that the absorption of medicines into the circulation is not necessary to produce their effects. When Cantharides are externally applied they produce strangury, when tobacco leaves are used in the same way, vomiting and catharsis are excited. If different organs can be thus affected by external applications, why may not the same impression be imparted from the stomach? Shall I say that it is through that mysterious principle sympathy, of which we talk so much and know so little, that our medicines produce their effects? That some organs have a susceptibility of being acted on particularly, through the nervous system I believe: thus I suppose mercury to produce a salivation and cantharides strangury; it is upon this observation that the classification of medicines is founded, and the practitioner will not deem it an unworthy remark, that those articles which are injurious to particular parts in health have a reverse effect in disease, thus stramonium which is particularly injurious to the

nervous systems in health, when this same systems is diseased, as in Epilepsy, will sometimes bring relief. This remark was first suggested to me by a singular fact: a patient worn down by a diarrhoea which resisted all the ordinary remedies, was induced to engage in a whisto bacco factory, where, whilst his companions were tortured by colick, this man rapidly recovered: there appears to have been given to his diseased bowels, by an article which in health, would have robbed them of their vigour.

There are certain medicines whose operation has been particularly the subject of dispute. The class of Astringents, so much used in certain hemorrhagick states of the systems, have been supposed to effect their object by constringing, or diminishing the diameter of the bleeding vessels. How this constringing power is conveyed from the stomach is not easily understood, but this aside. If this view be correct we should suppose that astringents would have an efficacy proportionate to their astringency, but we find the best astringents are not the most useful, so far from this, that some of the most useful medicines, when astringents are supposed to be indicated do not possess the astringent principle or possess it as a very insignificant feature of character. There is an argument which I have heard urged, to my mind, irresistible; it is this, if these medicines have the power to constringe the vessels of the bleeding point, it is fair to infer that the whole vascular system may be constringed; if so the diameter of the whole would be diminished, and the force applied to the weak point compared with the resist-

ance would be the same. Then these astringents must possess some other virtue, what this is, we will try to explain.

Since this doctrine is not admitted, how do these medicines act? In any attempt at explanation we must advert to the state of the system, which, I believe, we will ~~find~~ invariably find to be irritable and debilitated; if so any article which will allay irritation, and invigorate the whole system and through it the bleeding vessels, will suspend the disease. That astringents are of the tonick class will not be disputed, and perhaps by giving tone they allay irritation. That the hemorrhagy does sometimes depend on irritability the prompt relief afforded by opium seems to show. It has been granted by some violent in opposition to the doctrine here canvased, that these medicines may act by virtue of their astringency in bowel complaints, but even this seems granting too much; perhaps they may render some little temporary service, but even here I would refer their greatest power to their tonick virtue.

If it be granted that tone can be imparted from the stomach to vessels at considerable distance, surely it may thus be communicated to the intestines. The dose appears to be too small to affect much by its astringency, but how can we expect much from the accidental application of a small quantity of astringent matter to the surface of the intestines? If the medicine could be kept separate from the excrementitious matter and thus preserve its force undivided, perhaps there might be some ground for the opinion: but further this

most powerful astringent is not the best medicine.

Perhaps the class of Expectorants might be thrown out of the Materia Medica without any injury to our practice. I do not believe that there are any articles particularly determined to the lungs, we want proof, for the discovery of the aroma of certain articles for the exhalation from the lungs is not conclusive evidence. There is no necessity for such an opinion when we can account for their effects upon principles plain and easy of comprehension. I would not say positively, but perhaps these medicines are of two kinds. The first excite nausea and thus either by direct sympathy between the stomach and heart, or indirect by their effect upon the nervous system, tranquilize the heart and enable the debilitated vessels to recover, this is also favored by the effect upon the skin, for the diaphoresis at the same time that it removes the stimulus of the calorick, may effect something by dividing the force of the heart more equably between the lungs and the surface of the body. The second act by their tonick power, by their effect upon the general system, imparting tone to the weakened vessels and permitting that secretion to go on which appears to be necessary to, or consequent upon, a return to health. This explanation derives support from the fact that notwithstanding the nauseous and complicated mixtures called expectorants, the lancet, and if I am not mistaken a cordial diet, in different stages of the system are the best expectorants.

The class of Emmenagogues does not deserve a better treatment.

on their operation can be explained upon the same principles.

Diaphoresis being frequently observed to attend the termination of fevers, and the effect mistaken by a short sighted philosophy for the cause, gave rise to the early and injudicious use of Diaphoretics. But though they have been abused, we will not discard them, for under the guidance of good principles, they possess advantages which entitle them to our regard.

Diaphoresis appears to be produced in three different ways. First by exciting nausea, the effect of which is to relax the superficial vessels, and at the same time by sympathy to excite them to action. Diaphoresis is produced a second way, by the medicine increasing the action of the heart and invigorating the whole system. Diaphoresis is excited in a third way inexplicable by me, perhaps by sympathy between the stomach and skin. Hence diaphoretics are naturally divided into three claſses, to be used in two very different states of disease, easily recognised by the enlightened practitioner. Perhaps the best effect of the first claſs is calming the heart and thus permitting the inflamed vessels to recover from their debility. I view the second as valuable by invigorating the whole system, and permitting the skin to perform a function which it never fails to do in health, when the system is supplied with caloric. The third claſs possesses in some degree the properties of the other two, affording a vehicle for caloric and perhaps also by dividing the force of the heart more equably between the inflamed part and the surface of the body; the first effect is easy of comprehension, but

ow a more equable division of the vis a tergo is produced cannot be so asily understood. The aggravation of the symptoms produced by the suppression f perspiration in pneumonia and dysentery may throw a ray of light upon his dark point. Is not the notion favored by the fact that a suppression of a long accustomed discharge almost immediately throws some point into disease, and invariably that which has been previously weakened? Moreover the establishing the old or some other discharge, as immediately affords relief. I have heard of an asthmatick who enjoyed a long respite from his afflicting disease by an obstinate diarrhoea. I know another patient who being a long time fatigued with a similar ~~disease~~ complaint was at length cured, but directly he was seized with symptoms threatening phthisis, which were relieved by an issue.

If the increased discharge of fluids from the intestines can bring so much relief, may we not rationally expect some advantage from establishing a discharge upon the whole cutaneous surface? This process of reasoning has inclined me to the opinion, that diaphoreticks may be serviceable by dividing more equably the force of the heart between the inflamed part and the surface of the body.

The view here taken of the modus operandi of diaphoreticks, whilst it acquaints with the intention, and suggests the mode of using these medicines, tends to the ruin of that practice which is the sick man's abomination, I mean the indiscriminate use of hot slops, so abundantly poured down to produce a sweat. In health they no doubt will produce both diuresis and diaphoresis, for the kidneys and the skin will throw

throw off the fluid in proportion to its redundancy, and in obedience to the same hidden law which bids the lungs expand and the intestines throw off in due season their contents. But in a fever stops may be poured down hourly, to the great annoyance of the patient, and unless associated with the lancet or nauseating medicines, will avail nothing in reducing a diaphoresis, the cutaneous vessels must be relieved from the great injecting force of the heart and then they will perform their function, without the aid of the stops, which is to exhale the redundant fluid and caloricks. This doctrine must not be understood as interdicting the use of refreshing drink; it only requires that the sick man's feelings, and not the silly notions of the theorist, should guide the bowl.

Many have declared worms inoffensive, and of course with the same breath have proscribed anthelmintics. But that worms may sometimes produce inconvenience, is perhaps as plausible as that the bile should become vitiated and constitute a source of irritation: these worms are as natural to the body as the bile, and why may not such an alteration take place in their number or character, as to render them inadequate to their function, offensive and requiring their evacuation. That they sometimes do produce unpleasant symptoms, whether as has been conjectured by feeding on the chyle or in some other way, is at least probable from the sudden relief which sometimes follows their evacuation. But whilst I admit the possibility of worms being occasionally the cause of uneasiness, I must protest against the opinion which makes them so com-

nor a cause of disease: we cannot account for the operation of anthelmintics upon different principles.

Dr Rush instituted a course of experiments to discover the most powerful anthelmintick, but these experiments only prove, that justly esteemed as Dr Rush was, for moral worth and intellectual excellence, like other men, to use a term as true as it is harsh, would sometimes do very foolish things. The speculative mind of Dr Rush did not pause here; he boldly advanced to ascertain the object of these animals. Their uniform presence argues their utility, but I must think the Doctor unhappy in his speculations here also. He supposes they are destined to correct the bad effects of a surfeit. What are the bad effects of a surfeit, but the consequence of mechanically distending the stomach, and exposing the surface of the intestines to the irritation of ingesta? How worms can correct these I cannot discover, any how if this is their function they perform it poorly, for a surfeit never fails to produce bad effects. Moreover, we find them abounding in persons whose prudence and delicacy of habit must ever preclude the danger of a surfeit, indeed so commonly are they found in sickly and delicate children as almost to lead to the opinion that they are destined to correct or destroy vitiated secretions; but I do not think that we possess that intimate knowledge of their nature which alone can warrant a conclusion relative to their function.

Dr Rush's experiments led him to the hasty conclusion, that nature had implanted in children an early aptitude for ripe fruit and saccharine matter to prevent the accumulation of worms. Now for these to

produce their effect they must pass unaltered to the very hiding places of the enemy, but this is presuming rather too much upon the accommodating disposition of the digestive organs.

It may be asserted that reasoning is weak and acts out of character when opposed to experience. How is it that we have such happy results from the use of anthelmintics? I reply because your anthelmintics are either good tonics, or powerful cathartics. It appears that the more vigorous the circulation within a certain range, the better is the health of the body; your anthelmintics such as the carbonate of iron, and chenopodium, by their permanent stimulant effect I presume invigorate the system, although by an impression upon the stomach simply they may have a good effect. The manner in which cathartick anthelmintics act, is not so easy of explanation, but it is fair to infer that they afford relief that they do where worms are at easpects: they generally stimulate the canal, throw off the vitiated secretions, and long accumulated feculent matter: they somehow appear to add new vigour and elasticity to the springs of life, hence the vigorous health which often succeeds to violent and acute disease and which has been erroneously referred to the disease itself.

What must be done with the mechanical anthelmintics? I unhesitatingly declare my want of belief in such remedies: if such medicines do produce relief I think it must be by their cathartick or hidden narcotick virtue. Any article capable of inflicting a death wound upon the worms, I should suppose dangerous to the delicate surface of the canal,

How is it possible that the small quantity of these articles, involved, & diffused through the feculent matter could ever destroy the worms mechanically. As to the pulvis stanni, there is no necessity of referring its good effects to any mechanical power when we know it to be combined with one of the noblest tonicks, arsenic.

Lest I may not have been sufficiently explicit, this is my view of the subject. That worms may sometimes occasion symptoms requiring their expulsion, but of few unjust charges are brought against them. I do not say there are no worm destroying medicines, they may be destroyed by correcting the secretions upon which they ~~expend~~ lived, by a direct poison, by the medicine itself so occupying the pores as to cut off respiration or even nourishment itself. But I do believe that their utility does not so much ~~expend~~ consist in killing worms, as in giving tone to the system by direct tonick power, or evacuating the offensive contents of the canal, which appear to clog the wheel of life.

I have thus, in obedience to the laws of the Institution reluctantly drawn myself on the mercy of the faculty. As this has been the first, so will it be the last opportunity I shall have of formally expressing my thanks for the instruction I have received, and my earnest wishes for the prosperity of my Alma Mater.

An Essay on

Phthisis Pulmonalis.

Submitted to the examination of the

Right Revd. James Kemp D.D. provost,

The Regents,

and Medical Professors,

of the

University of Maryland.

by

James A Denny, of Chambersburg - Penn.a

Baltimore 1817

To the learned Professors of the University of Maryland: This Medical Essay is most gratefully inscribed, as a small testimony of the Authors Esteem.

To Doct.r John Sloan, of Chambersburg Penn.a: This Essay is inscribed, as a feeble testimony of the Authors respect for his medical talents, and a memorial of friendship and Esteem.

An Essay on Phthisis Pulmonalis.

Introduction

The Diseases to which Mankind are subject, are numerous and direful; yet of those, many which were considered fatal, have been rendered, at least, less dangerous by the progress made in the Healing Art, and the ingenuity and exertions of Medical characters have contributed greatly to abolish some, alleviate and remove other Diseases, which have grievously harrassed Mankind: The progress already made, encourages still further exertions; Some have apprehended, that a remedy for almost every disease, may be found among the Animal, Mineral, and Vegetable Kingdoms; and thus the benificent Author of Nature, has furnished the means for curing the diseases incident to every climate: whether this be true in the extent alleged, or not, I am not prepared to say, yet the many excellent remedies extracted from those Kingdoms of Nature, by the ingenuity and persevering exertions of the Medical Faculty, encourage us to hope, that remedies

remedies will yet be found, even for those diseases tha
are now considered incurable: Among the many fata
diseases so much to be dreaded, may be ranked that,
by the name of Consumption, or Phthisis Pulmonalis:
Subject is difficult, but the disease is frequent,
every inquiry into its nature and remedies, is necessa
It is not to be expected, that my Ideas on this Sub
will be entirely original, or that a juvenile disserta
should add any thing new to what has been writt
on this disease, by some of the most illustrious p
sicians; yet such as it is, I fearlessly submit it to
candour & liberality, indulging a hope, that all its i
perfections may be attributed to youth and inexper
To enter into a minute and systematic discription
this formidable Disease, would far exceed the inten
limits of this Essay; my object is, chiefly, to attempt
a concise investigation of its Nature and Phenom

An Essay &c.

In this Essay, I shall divide the Phthisis Pulmona
into three distinct Species, viz. First, that which is
Hereditary. Second, that dependant on Scrophulous ha
Third, that excited in the athletic Constitution no

tainted with Scrophulus or dependant on original
Consumption (Diathesis: I shall not notice Phthisis
arising from original or Hereditary debility, as I
conceive it to be the same, in nature, as the third
Species: neither shall I distinguish that which
is innate, from the Hereditary, unless it is attended
with a Scrophulous habit, if so, it must be compre-
hended under that Species: This arrangement of
the disease, I conceive important, as it will tend
to its further investigation, and a mode of treatment
adapted to the different Species.

Diagnosis.

Hereditary Phthisis, Characterized
by a peculiar delicate habit, derived from the Parents
or ancestors of the Patient, easily susceptible of caus-
ses which excite the disease then latent in the Sys-
tem, when excited, is generally attended with purul-
lent Expectoration from the Lungs, & Hectic fever.

Scrophulous Phthisis. This habit is
distinguished by tumours of the Lymphatic Glands,
particularly of the neck, swelled upper lip, florid
complexion, smooth & fair skin, tumid abdomen &c.
The Lungs become affected, a purulent expec-
toration

attended
=toration ensues, also, with Hectic Fever.

The third Species, occurs in the ~~third~~ constitution or
=ally healthy, and is also designated by purulent e
=toration from the Lungs attended with Hectic fever

Although I am sensible that cases of this disea
have occurr, in which there was no purulent e
=toration, or Hectic fever; yet I conceive, this does
invalidate the above definition, for a similar
=jection will apply to almost every Disease: The
=tion therefore is, not whether the above classificat
and definition be unobjectionable, but whether
the advantages belonging thereto, be not such as
justify their adoption: Notwithstanding all the
imperfections, it is to be observed that each Speci
enumerated, is attended with a peculiarity of Con
=tution, and that the disease in question, is eviden
a general affection of the System; on this I predic
my opinions of the different nature of the Phenome
produced in the Lungs. As Drs Cullen and Rush ha
treated very satisfactorily on Phthisis Pulmonalis
as the same in nature, wherever it occurs; I consi
der it unnecessary, in describing each Species (wh

quotations are necessary) to quote those authors with exactness: I shall therefore refer to them, as they are the most satisfactory on this disease, I have yet had the opportunity of consulting. From my definition of the different species of Phthisis, each being attended with the purulent expectoration and Hectic fever, the question will naturally follow, wherein does the nature of the Phenomena produced in the Lungs differ? Observe first, that numbers of People are repeatedly exposed, with impunity, to the circumstances which excite consumption of the Lungs: That it is only on a constitution of a peculiar nature, that these exciting causes operate: That all remote causes, acting on this constitution, operate as exciting causes. By the Hereditary, let it be understood a peculiar habit [illegible] generis, derived at conception, perhaps, from an imperfect, or diseased, action of the masculine Semen on the female Ovaria. This habit, is marked with a peculiar instability and weakness of the vascular System, particularly of the Lungs, indicated by the person being subject to a frequent Hemoptisis and Catarrh. In this Species, I conceive the disease to be latent in the

the Systems; this I infer, from its extreme Suscep-
= lity of the injurious actions of those causes, to which
others are daily exposed with impunity; many I o
= served labouring under great debility. This sus
- tibility then, cannot be referred to mere debility,
= stituting, what a modern author has pleased to
Hereditary predispositions, but rather, to the seeds
the disease, implanted into the System at concepti
whence I conclude this, to be a peculiar constitutio
sui generis, in which Phthisis is easily excited.
it is excited by frequent overexertions of the Lung
in speaking, singing, or blowing musical Instrum
by inspiring certain kinds of dust, or vapour, by
den variations of atmospheric temperature, by
- preping the chest with tight bandages, and fini
every thing that tends to excite the System, is lia
to produce the disease. In cases of this disposit
Hemoptisis is easily induced, that peculiar ten
= ness of the vascular System in the Lungs, renders the
vessels liable to give way, even from an increa
circulation through them, or, from an irregula
impetus, occasioned by the action of coughing: whe

Hæmoptisis occurs, all the distressing symptoms of Phthisis are generally to be apprehended; for the rupture, soon assumes the ulcerative process, and terminates fatally, on account of the Hereditary constitutional affection. Hæmoptisis occuring in this species, is therefore generally to be regarded, as a commencement of Phthisis, an effect of diseased impregnation.

I shall now proceed to the consideration of the second species, or Scrophulous — In distinguishing this species from the first and third, I do not infer that a scrophulous disposition is always attended with ulceration of the Lungs, on the contrary, the former prevails, where the latter is rarely or never known; As our worthy professor Doct.ⁿ Potter. observes, out of one hundred and sixty five cases of Phthisis, he has witnessed, only ten or fifteen were of a Scrophulous habit, suffice it to say, that Phthisis is sometimes the consequence of Scrophula, and that the same Scrophalous action, exists throughout its course, evincing itself more particularly in the Lungs: Phthisis is not so easily excited in the Scrophulous, as in the Hereditary species, hence the frequency of

of the latter, compared to the former: without enume-
ting the many causes of Scrophulous Phthisis, I
it sufficient to state, that it is excited by vario
causes of irritation, as common inflamation of
Lungs or their membranes, by Pleurisy, Peripneu
ny, Catarrh &c. Before I conclude, permit me to i
duce Doct. Potters assertion, viz. That ulceration of the
Lungs with Scrophulous predisposition, is always f
This is no doubt owing to the Scrophulous nature of t
tubercles, or ulcers, whether those tubercles be a morbi
affection of Glands, or whether they are formed, acco
ing to Doct. Baillie, in the cellular structure whic
connects the air cells of the Lungs. The same morbi
action exists throughout the System. When Hemop
sis occurs in this species, I would also consider it a
commencement of Phthisis, but generally, the effect
tubercles, occasioning an obstruction to the circulat
as Doct. Rees observes, Tubercles may thereby render
the small vessels liable to give way.
I shall now proceed to a brief consideration of t
third species. The disease in this, is induc
by various diseases and debilitating occupation

as a sedentary study, and various sedentary occupations;
As I deem it unnecessary to enumerate those diseases, I refer
to the authors abovementioned, from which, with little
attention they might be selected. The morbid action
induced in this Species, I conceive to be different
from that, in either the Hereditary or Scrophulous;
This I infer from the two latter always proving
fatal, whereas the former admits of a cure, evidenced
by observation, and the testimonay of Medical writers.
The Hereditary, I have term'd a disease Sui generis,
the nature of which, is evidently unknown to Physicians.
Hemoptisis occurring in the Hereditary or Scrophulous
Species, is considered as a commencement of Phthisis,
The injury thus induced, being aggravated by the dis-
ease of the System. In the third Species, it is different,
having no such disease to encounter, the rupture is
soon healed: I would therefore not consider Hemoptisis
in this Species, even as a dangerous symptom, compara-
tively. From what has been advanced, it must be obvious
to all, admitting Hereditary Phthisis a disease Sui gene-
ris, that the nature of the Phenomena, produced in the
Lungs of the species enumerated, is different. This will

per-

perhaps be more obvious, in the treatment hereafter to be considered.

I shall now proceed to describe the symptoms and progress of Phthisis, when induced in the Lungs.

In the Hereditary and Scrophulous species, it usually commences with a slight and short cough, which gradually increases in violence, at first, attended with mucous expectoration, but owing to the rapid progress of the disease, it soon becomes more copious, viscid, and opaque, assuming a yellow or greenish colour, and purulent appearance: The breathing is easily hurried, by any bodily exertion, The patient becomes leaner, and more languid and indolent: during this progress, pain, more or less severe, is felt in some part of the Thorax: The pulse changes from inflammatory indication, to hypothenic chilly, one often felt by the patient; he is seized with morning and evening febrile exacerbations, the latter terminating in sweats during the night, attenuating with a colliquative diarrhoea the violence of the symptoms increasing, the Disease proceeds to a fatal issue.

The third species, commences and proceeds in a

more insidious manner, the inflamatory actions, Cough, pain in the Thorax, Expectoration &c. sometimes continue for one, two, or more years, and even terminate fatally, without the Patient ~~previously~~ making any complaint. I saw a case of this in a young Lady, whose habit and disease, indicated this species; She had been effected with some of the above symptoms, for near two years, all the time cheerful, and apparently insensible of her disease: She retired to Herbed one evening, at her usual hour, with one of her female relations, and awoke in the night, complaining of a numbness and coldness of her extremities; in a few moments She expired. This however, is a sudden and unusual termination of the disease, although, if, it is at liberty to progress, which is too often the case, from the false Idea of its nature entertained by Physicians, it generally terminates fatally.

I come now to make a few observations of the treatment of each species: This, must evidently be conducted on general principles, with a view to correct the fault in the habit: To effect this, it is necessary

First, to avoid all the remote and exciting causes of

of the disease: Second, to palliate, and remove urgent s
-toms: Thirdly, to restore the natural tone of the System, w
belongs to mankind in their first State of civilizatio

In the progress of Phthisis Pulmonalis, Dr. Hugh d
-tinguishes three different States of the System, viz Firs
the Inflammatory: Second, the Hectic: third, the Typ
~~State~~ as the Hectic action occurs in the Typhus State
consider its distinction of no importance, particularly
it does not influence the treatment of the disease.

I shall first treat of Hereditary Phthisis: This
-cies, as I before observed, does not consist in either H
-ditary debility of the System, or Hereditary malconform
of the Chest, as Doctr. Hugh asserts: The Pulmonary co
-sumption, is itself Hereditary, being innate in the Sys
and remaining latent, untill excited by some of the
abovementioned causes; hence the propriety of atten
-ing its cure, early, before the System is exposed to any
citing causes of the disease; The remedies then, should
not be those adapted to mere debility, but those, which
will effect a change in the System, incompatible w
that peculiar morbid action (or Susceptibility) which
I conceive constitutes this Species; hence the benefici

effects of Mercury, as a palliative; The treatment best applicable to this species, is - first, exercise - this should be used with great caution, otherwise it will act as an exciting cause of the disease: Secondly, country air & dry situations: thirdly, loose dresses, and a careful accomodation of them to the changes in the weather: fourthly, temperate living - and occasional gentle evacuations - per intestinum; blood-letting may occasionally be employed, mercury has been found to palliate the Symptoms, but accelerate death; as there is yet no radical cure for this formidable Species of Phthisis, I consider it unnecessary to enlarge further on its treatment; I shall therefore proceed to the treatment of Scrophulous Phthisis: In this Species, we have also to contend with an unknown disease; first showing itself in the Lymphatic glands, which inflame - and after sometime suppurate; but other appearances of the System, already described, too strongly indicate, a general diseased System; the attention of the Physician should therefore be directed to the Habit of the Patient, with a view to correct it, this should be attended by strengthening the System, and preserving the dis-

different parts vigourous and healthy: The most proved treatment is The administration of Bark, Bath, regular exercise in the open air, cleanliness, n-rishing diet with a small portion of wine, animal and sea beathing are highly recommended, mercury been used with some advantage, Setons have also been employed with advantage, medicines to obv occasional symptoms as costiveness &c are necessary: When the disease appears in the Lungs, with all the dangerous symptoms of Phthisis, the above treatm should still be urged, but moderated at the disc-tion of the Physician; for untill the habit of the Pa be corrected, no hopes of a radical cure is to be expect I conceive it unnecessary to enumerate the great va-ty of medicines recommended to counteract the Scrop-lous habit, as a knowledge of their nature, is suffic-ent to evince their inefficacy. I shall conclude a few observations on the treatment of the third spe This is the disease, of which so many ~~boast~~ cures ha been boasted, and I think the only Phthisis Pulmon-lis, which has yet been successfully treated; As it almost uniformly arises from a long contin

ed inflammation of the Lungs &c, the advantage of blood-letting and antiphlogistic regimen, in its incipient stage, is obvious; Doctr. Rush relates several cases of a radical cure obtained by blood-letting, country air and exercise He also relates two cases of cure, after an extensive rupture in the Lungs - by hemorrhage - of a quart of blood, he even ascribes their recovery to this sudden reduction of inflammatory action: However this treatment is only applicable to the early stage of the disease, the indication of which is to subdue the inflammatory action, when this is effected, Mercury is to be resorted to, Its stimulous in overcoming and subduing the disease, in this species, is so effectual, as to completly eradicate it from the System, leaving only its concomitant, debility, which readily yeilds to the common remedies: I lately witnessed two, or three, cases of the efficacy of this invaluable remedy, The disease appears to be completly removed, and the System gradually acquiring its natural health & vigour. The action of mercury in each species, I conceive sufficient, to establish the different nature of the Phenomena produced in the Lungs.

An
Inaugural Dissertation
on
Cataract
Submitted to the examination
of the
Right Reverend James Kemp
Provost
and to the Regents and Professors
of the University of Maryland
for the Degree of
Doctor of Medicine
By
E. L. Warring
of
Essex County
Virginia
March 1817.

29-82.

Sir

As it is my intention, that, this hasty and imperfect sketch, should, like the disease it treats of, remain veiled in utter darkness, nor ever enjoy the benefit of the light of the Press; any attempt to apologize for its imperfections might appear unnecessary. But sir I should be guilty of injustice to you, and commit violence on my own feelings, were I not to state the causes that have prevented my producing something more satisfactory on a subject, ~~which you~~ the importance of which, you were at so much pains to impress on your class, with your usual ability, zeal, and industry.

At the request of the learned and accomplished gentleman who fills, with so much credit 29-8.D.
to himself, honour to the university, and I have no doubt eventually usefulness to society the Practical Chair

I had determined to have made Hydrocephalus the subject of my inaugural essay. The necessary arrangements for gaining the information regarding this subject, I had made early in July last, and had actually commenced my undertaking, when a severe and distressing Hepatic affection confined me during the months of July, August and part of September after which I was compelled to travel until I came on to Baltimore. Thus disappointed in my expectations and my health continuing delicate through the greater part of the winter, I was compelled to relinquish my adopted subject, and not until late in the season was I enabled to pay much attention to my present crude and undigested essay. Thus Sir I have deemed apology due you, the motives which induced me to act as I have been stated. I should offend both your delicacy and good sense by being more explicit.

May you long continue to enjoy health and happiness, and by your ability and industry continue an ornament to a liberal profession, and an honor to this rising University. With sentiments of great respect I subscribe myself Dr Sir Yours &c

Wm Gibson M.D. Professor of Surgery University of Maryland

E. L. Ware

On Cataract

Cataract, is a term, derived from the Greek καταρασσω deturbo, to confound &c and is now generally employed to designate that affection of the eye, attended with a whitish opaque appearance, seated behind the pupil, causing a species of blindness, more or less compleat, in proportion to the degree of opacity. It is the γλαυχωμα of Hypocrates, the υποχευμα of Galen and the Suffusio of Celsus. The seat of this disease, is, in that humour of the eye, usu-ally denominated the Christaline, it is a matter scarcely worthy of investigation, whe-ther the Lens, or its capsule are the imme-diate seat of Cataract, as the knowledge of that fact, would be of but little impor-tance to the practitioner, the treatment requir-ing-

829-A.D.

-ing no variation on that account about the
time of Hypocrates, and in fact by that just-
ly celebrated Cultivator of the healing art, a
correct opinion as to the seat of this disease
was entertained. The promulgation, however,
of the absurd hypothesis, that, the lens was the
immediate organ of vision, which, was first
advanced by Galen, and subsequently received
the sanction of all the Literati, cast a veil
of grop ignorance over the correct doctrine of
the Father of Physic, which entirely obscured
it, until sometime in the seventeenth century.
We are indebted for its revival, to Lasnier
who wrote about the year 1656, and was suc-
-ceeded by Geoffroi, Bonetus, and a few others
but the fact was not generally known or
acknowledged until late, in the last century

29-82.

when the united efforts of a Heister, Brissen and others, removed from the eyes of science, the last remnant of that veil, which had remained over them from the days of Galen. I might here pause for a moment, and suggest a hint to those superior minds, that stand conspicuous on the towering mount, and steep ascent of Science that, as they value the advancement of truth, and the prostration of ignorance, and false theories, they should weigh well their opinions before they palm them upon the world as truth enforced by the high authority of a name —

But I conceive it now to be unnecessary, the "long agony is oer," a new era is beginning already to dawn upon science, already in her steady march towards ~~to~~ the polar star of truth, is she shaking off her shackels, and refusing

529-A.D.

longer to bow with reverential homage, at the shrine of a name however imposing. This disease frequently makes its approach in the most insidious manner, commencing, with a weakness or imperfection of vision, next, a speck occupying a part or the whole of the pupil of a grey or whitish appearance easily distinguishable from the natural colour. As the opacity advances the vision is gradually diminished, and that confusion of minute objects occurs, which has given name to the disease. In this stage of the disease, the patient sees best in a moderate light, from the circumstance of the pupil becoming more dilated, thereby, admitting more rays to the yet transparent circumference of the Lens. I might here mention the different kinds of Cataract usually described by oculists, but as the diagnosis is al- 529-A.D.

lowed

allowed on by all to be difficult, and often indeed fallacious, and seeing moreover, that, it is a matter of no great moment with the surgeon, to be able, to distinguish, between the hard, the fluid, the soft, or racemous Calarach; I shall for the sake of perspicuity and brevity omit a detail, which I consider as perhaps worse than useless — This disease is incident to all ages, and conditions of life, but persons over 45 years of age, have been supposed most liable to its attacks. It not unfrequently occurs at birth, and is then termed congenital. Its causes are somewhat obscure. Baron Wenzel says that it occurs most frequently in persons whose occupations subject them to great degrees of heat as Blacksmiths, Glass blowers &c. It most frequently arises without any ostensible cause. It is always necessary to attend to those circumstances, from which we may be enabled to form a correct opinion, as to the probable result of an operation. We should endeavour to discover whether the ~~Iris~~ Retina

829-8D.

Retina yet retains its natural sensibility, this is known by the Patient being enabled to distinguish a strong light, when suddenly passed before his eyes; and by the contraction of the Iris. The regularity of the Pupil (for Charles Bell considers favourable, but its irregularity does not preclude all hope. When the opacity has been slow and gradual in its approach, and is not consequent on violent deprecated ophthalmia. When there has been no distressing head-ach, nor pain in the eye; when the Patient is not unhealthy or decrepid; under these circumstances, we may reasonably hope for a successful result from an operation. The only disease with which Cataract is liable to be confounded is Gutta Serena. The colour of the Pupil has been considered, as affording a good diagnostic; and as a general rule is certainly correct, but Baron Wenzel asserts that he has seen the Pupil retain its natural colour in Cataract. I consider, however, that the diagnostic

to Mr Ware must be satisfactory in most cases;
which I will therefore transcribe in the words of
that celebrated oculist. "It is, says Mr W are a rule
of certain, as, almost any in surgery, that when
an eye in a state of blindness is accompani
ed with a clear black pupil, which is incapa
ble of varying its size, according to the degree
of light to which the eye is exposed, this blind
ness is occasioned by a defect in the organ of
vision, the sensibility thereof being impaired, and is
removable only by the proper application of stimu
li, to rouse it again to its natural action"

I shall now proceed to notice the different
methods that have been proposed for the remov
al of this truly afflicting disease. These may be
arranged under three heads Viz; the operations
for Extraction, of Couching or Depression, and
that lately recommended by Sir William Adams

1st Extraction. This operation is of comparatively
recent date, having never been performed
until

until near the conclusion of the 17th century
Pretagius was the first operator who extracted
the Lens for Cataract. Lotterius of Turin followed
him in this mode of operating. Daviel first
gave it publicity, and the industry, zeal, and
dexterity of Wenzel brought it as near perfect
tion as perhaps it is capable of attaining —

I shall omit to detail the different com-
mendations that have been lavished on this
mode of operating by its supporters; nor shall
I on the contrary, sum up the many objections
that have been made to it, by the advocates of
a different mode of operating; suffice it to say
that I believe, that, the operation, has been
too highly recommended by its supporters, and
too much decried by its opponents. The support
of a favourite opinion, and not a candid inq-
uiry for truth, may I think with too much
justice be charged on either party. "Medio
utissimus ibis" —

During the operation, the patient should be seated on a low seat, facing a northern light. If he has one sound eye it should be covered. A careful & steady assistant should be chosen, and directed to support the patient's head on his breast. He should now with the fore finger of his unoccupied hand, draw the eyelid and gently press the tarsus, against the edge of the orbit, avoiding as much as possible, all pressure on the ball of the eye. The surgeon should be seated somewhat higher than the patient. When he operates with his right hand his right foot should be placed on a stool, so or so that his knee, may be raised, so as to support the elbow, and bring his hand on a level with the patient's eyes. He must now take the Cornea knife (Wenzel's) holding it as he would a pen, and resting his hand steadily on the orbit with his little finger: he waites until the eye becomes fixed and steady. The knife should now be pushed forwards into the outer part of the Cornea, about the half or less than a half a line from the Sclerotica in

in such a direction that it may pass horizontally, and in a parallel line with the plane of the Iris and must be brought only near the inferior edge of the Cornea. As soon as the operator has punctured the Cornea, at its anterior edge, the assistant should let the eyelid fall removing all pressure as soon as the section of the cornea is completed the eye should be closed. The next stage in the operation consists in puncturing the capsule of the Lens; this is effected by introducing a needle of a curved shape at the wound of the cornea into the pupil, and moving it freely and quickly, lacerate the anterior Capsule of the Lens; the application of gentle pressure, now, to the eye, force the Lens to quit its station, which should be discontinued as soon as the ~~eye~~ lens starts through the pupil. It sometimes becomes necessary to assist its escape through the aperture in the cornea with the needle or scoop, and any portion of the opaque fluid remaining, should be removed by the Curette. Should the Capsule now be

e found opaque; it should be extracted with the
orceps; it sometimes happens however that the
apsule although transparent at the time of ope
ating, becomes subsequently opaque, forming
hat is called secondary Cataract: in such cas
s the section of the cornea must be repeated
nd the Capsule extracted —— After the
heration the treatment consists simply in com
batting inflamation; the Patient should be
onfined on his back, for eight or ten days, in a
ark room: no particular dressings are necessa
y, a loose compress is perhaps the best. The
Patients hands should be confined, so as to
revent his raising them to his head. A low
iet should be prescribed, both before and after
he operation, and occasionally the lancet &
ome mild Cathartics ——

I shall now proceed to notice
he seconds operation that has been recommend
ed for the removal of the opaque lens; this is
termed Couching or Depression in this operation,

the Lens is removed from the ~~organ~~ axis, of vision by depressing it in the vitreous humour, by means of an instrument, usually, perhaps, improperly called a needle. The form of this needle has been varied in the hands of different surgeons; those most commonly now employed are Heys, Scarpa's & Sir James Earls, of these I should prefer Earls, which however, I think, has one capital objection, which I will point out. This needle is somewhat longer than Mr Heys, slightly curved at the point, with a smal groove on the concave side, and combines every ~~[illegible]~~ advantage that could be desired in the form of an instrument, with this exception that, the shoulders are too broad for the part of the instrument immediatly posterior to them. In consequence of this glaring fault, in every case in which this instrument is used, at least in every case in which I have seen it used although in the hands of an excellent oculist and steady and dexterous operator, an escape of the vitreous humour is invariably the consequence.

To obviate this dreadful consequence and to give the operation every chance of succeeding on this score, I have constructed a needle in every respect similar to Earls, with the exception of the part posterior to the shoulders, being large enough completely to occupy the section made in the sclerotica by the shoulders of the instrument; thereby preventing entirely the evacuation of the humours of the eye

In performing this operation every thing should be arranged as in the operation for Extraction. The operator seated as there directed, takes his needle holding it as he would his knife in Extraction, turning the convex side anteriorly, plunges it into the eye about one line distant from the junction of the cornea and sclerotica, and gradually pushes it forwards until it appears on the summit of the opaque lens and then pressing it from above downwards causes it to descend to the bottom of the vitreous humour. The motion which should be given to the needle

t this stage of the operation, should be calculat
d to tear the anterior Capsule of the Lens. Because
he capsule although transparent at the time couch
ng is performed, yet it is liable from succeeding
nflamation to become opaque, causing the mem
branous or secondary ~~or secondary~~ cataract. Some
times several efforts are necessary to depress and fix
he Lens in the vitreous humour, as it frequently
ises in consequence of not having entirly escaped
from the Capsule. Mr. Charles Bell advises in such
cases, that the needle should be cautiously withdrawn
from its hold on the Lens, but not entirly from
he eye, but if the lens does not appear at the pu
pil, the needle should then be cautiously withdrawn

The subsequent treatment is in every respect
imilar to that after extraction

The only thing that now remains to be
mentioned is the operation that has been so highly
recommended to the medical world by Sir William
Adams, and which from the flattering accounts we
have received of it, is I think calculated to super
cede

cede all others, and reflects additional splendour
on a profession already the most improved, most
honourable, because decidedly the most useful to the
human family. As Mr Adams has given a de-
tail of this mode of operating, and also an accu-
rate description of his needle I shall take the
liberty of giving them in his own words. From
his discription of his needle I have had one construct-
ed, which I submit to the inspection of the faculty.

"The blade of this needle he observes, which
he now employs is eighty tenths of an inch long,
the third part of a line in width, nearly flat
having a slight degree of convexity throughout its
whole extent. It is spear-pointed, with the edges
made as sharp as possible to the extent of four
tenths of an inch. Beyond the cutting edges it
gradually thickens, to prevent any discharge of
the aqueous or vitreous humours. The handle is of
the usual length. The effect of this instrument
is easily understood. It enters the coats of the

he eye, with the most perfect freedom, traverses
he posterior chamber, without in the least aggra
isplacing the cataract, and cuts it in pieces
with great ease, when it is not very hard. In-
ead of the cutting edge being confined to the
ere point it extends so far back as to be nearly e-
ual to the diameter of the cataract; by which in
hildren and adults, I am frequently enabled, at the
irst operation, to cut in pieces both the capsule &
rague Lens. Its convexity affords a sufficient de
ree of strength to prevent it from bending dur
ing its passage through the coats of the eye. some
aution in its use, however is requisite on the part
f the operator, otherwise, as it is an instrument of
reat power, and traverses the eye with so much
acility, it may wound the iris, or its point may be
arried too far towards the nose" Vid: Medical & Physi
al Journal of London Vol: 29th Page 91-92—

Operation" The pupil being in a dilated stat
rom the application of the extract, or a strong
olution of Bella donna within the eyelids about

an hour previous to the operation, and having ex-
cised the eye, by a gentle pressure with the concave
speculum, introduced under the upper eyelid, I car-
ry the two edged needle through the sclerotica coat
about a line behind the Iris, with the flat surface
parallel to that membrane. I then carry it cautious-
ly through the posterior chamber, without, in
the slightest degree interfering with the Cataract
or its capsule, till the point reaches the temporal
margin of the pupil, when I direct it into the
anterior, and carry it on to the nasal margin of the
pupil, in the line of the transverse diameter of
the Lens. I then turn the edge backwards, and
with one stroke of the instrument cut both cap-
sule & cataract in halves. By repeated cuts in
different directions, I afterwards divide the opaque
Lens, and its capsule in many pieces, and at the
same time take particular care to detach as much
of the latter as possible from its ciliary connection.
As soon as this is accomplished, I turn the instru-
ment, in the same direction as when it entered the
eye,

eye, and with it flat surface, bring forward as many of the fragments as in my power into the anterior chamber, by which means I frequently leave the upper part of the pupil perfectly free of opacity. By cutting in pieces the capsule & lens at the same time, not only is capsular cataract generally prevented, but the capsule is also much more easily divided into minute portions, than when its contents have been previously removed. The central division of the capsule and cataract, prevents the liability of their becoming too soon attached from the ciliary processes, and revolving on the needle, or slipping undivided into the anterior chamber. In cases of large and solid cataracts, this is very essential to the perfect execution of the operation, as the natural connection of the capsule with the ciliary processes, assists, in conjunction with the vitreous humour, to afford a sufficient counter resistance to admit of its nucleus being completely divided; which, were the connection detached, could not

be divided but by repeated operations vid
London Medical and Physical Journal
Vol: 29th Page 92-3

An
Inaugural Dissertation on

Syphilis,

Submitted for examination, to the

Trustees, Provost &

Faculty of Physic, of the

University of Maryland

By

Frisby Tilghman,

of MARYLAND 1829-AD.

When commencing a dissertation upon a subject, such as that at present under our consideration, we do not expect, either to originate any new ideas, as to the cause which first produced it, when it first made its appearance, or as to the manner in which Mercury, (which has been aptly styled the Sampson of the Materia Medica, and which when improperly used, may with equal propriety be denominated the adjutor of many of the most certainly destructive diseases to which the human frame is heir.) produces its specific effect, when properly administered. — The disease to which I refer, is known by the title of Syphilis, Lues Venerea, or more vulgarly called Pox, Syphilis is derived from the Greek words, σὺς a Hog, & φίλεω love, signifying an impure, or foul connection; or from Syphilis, the name of a Shepherd, who fed the flocks of King Melithous, who being proud of their number, and beauty, insulted the Sun, as a punishment for which, fable relates that this disease was sent on earth. A genus of Dis- in the class cachexiæ, and order impetigines of Cullen. It has never as yet been positively decided, where this loathsome Dis- first commenced its ravages, consequently it is a question sub judice, which is not very likely to be decided, as no nation will consent to bear the odium of having given birth to so severe a chastiser of our wickedness, and folly; fortunately for us, this is a point which does not materially affect the pathology of a correct view of the necessary treatment, neither will the limits of this paper allow a minute examination of the various evidences produced, both pro, & con, on this comparatively unimportant disquisition, but we coincide in opinion with Mr. Hunter, in generally

+ Dr. Potter

affirming, that as animals are not naturally formed with Dis-, or so as to run spontaneously into morbid actions; but with a susceptibility of such impressions, as produce such actions, Dis's must always arise from impressions made upon the body; and as man is probably susceptible of more impressions, that become the immediate cause of Dis-, than any other animal, and is besides the only animal which can be said to form artificial impressions upon himself, he is subject to the greatest variety of Dis-s. If one of those self-formed situations, we presume, the impression most probably was given, which produced the Venereal disease — As a proof that the supposition of Mr Hc- relative to mans being the only animal capable of forming artificial impressions upon himself, and further, that these artificial impressions when formed, are capable of producing a species of morbid action, sui generis; we have only to refer to that well known Dis- Podagra, which although hereditary, can run easily be excited in persons not hereditarily predisposed to it. This disease has never been known to exist in any of the inferior animals, except when produced by inoculation, and this has been positively denied by many; but we have a well authenticated case, which positively proves that the Dis- was produced by inoculation in a Dog+. This Dis- is known by its effects upon the genital organs, producing Chancres, Buboes &c — but we are not to forget its effects upon the system generally, without any appearance of the Dis upon the genitals, producing Ulcers in the Throat, Mouth, & Nose, elusters principly of a Copper colour, ending in scaby ulcers, blotches on the surface of the body, Nodes &c &c —

That this Dis- first commenced in the genital organs, and was propagated during the act of coition, we think there can be no doubt, for it is a well established fact, that a person having the venereal irritation in any form, unattended by a discharge, cannot commu-

=nicate the Dis- to another. It has been noted as a curious fact, that morbid poisons which produce considerable fever, such as the Small-Pox &c yield to the powers of the constitution, and are capable of a spontaneous cure; while on the contrary, the poison of Syphi=lis, which produces scarcely any fever, will not yield to those powers, but indespensibly requires for its extinction, the intervention of that art, which has proved so beneficial to mankind—

Is the matter of Gonorrhœa, and Syphilis the same, or in other words, will the Discharge of Gonorrhœa, produce Lues Venerea, and vice versa? Hunter and others advocate the affirmative of this disputed point, but with reasoning, which will not in our opinion, stand the test of experiment, which is assuredly the only true criterion from which to draw our conclusions. We believe however that the profession of the present day, al=most unanimously subscribe to the opinion of a specific diff=erence between the two Dis-s. The one is local, the other con=stitutional, the one may be cured without the interfer=ence of art, the other if not checked by proper remedies will produce inevitably the most distressing results.

The experiments of J. Hunter which go to prove that the matter of Gonorrhœa will produce a Chancre, and that the matter of Chancre, will reciprocally produce Gonorrhœa, are directly proved to be false by the decisive experiments of Benj- Bell, which were instituted by two Gentlemen on their own persons, and witnessed by Dr Duncan & him=self. In one experiment, the matter of Chancre was in=troduced into the Urethra, and produced a Chancre, and in the other, the matter of Gonorrhœa was placed between the prepuce and Glans penis, and produced Gonorrhœa of those

+ Swedaires

+ Professor Potter.

parts; and the matter in the last experiment having found access into the urethra, produced of course a Gonorrhœa in this passage. If the matter of Gonorrhœa & Lues was the same, we cannot conceive how it would be possible, for any man, who had been exposed to the infection during copulation, to escape contracting both Diseases, as in the act of coition the Glans Penis, & prepuce, must necessarily be immersed in the contagious matter. Gonorrhœa was not described as a symptom of Syphilis till half a century after its introduction into Europe, and often Chancres and the other symptoms of the disorder had been accurately described by the practitioners of the day — Of the precise nature of the Syphilitic poison, we are yet in the dark, and perhaps we cannot better describe it than by saying, that it is a peculiar acrimony, a specific animal poison, or virus, or to use a term which is a suitable apology for our ignorance, it is sui generis - The virus is solely communicated by immediate contact between two persons, and this communication most generally occurs in the union of the sexes, and through the medium of the genital organs, they being most exposed to the contact of the virus, and peculiarly adapted for receiving the infection, from the thinness of the cuticle of those parts - The Disease however may be produced by exposure of other parts of the body, as the hands, particularly if there is a continuity of the surface, hence Surgeons and Accouchers are frequently liable to take it. It has been produced by lying in bed with a person labouring under venereal blotches - + A case is also related, in which the disease was communicated to a Lady, by her permitting her betrothed the liberty of kissing her, whilst he was labouring under the disease. Can the Syphilitic virus be propagated to children by the act of generation? or to speak more correctly can an infected Father communicate the Disease to the Foetus, through

the semen, in the act of coition? Or is an infected Mother having no disease about the genital organs, capable of communicating the virus to the Foetus in Utero, through the medium of the circulation? Swediaur mentions a case to prove that the Disease may be communicated by the semen, from the Father to the child.—

A Dragoon in the king's guards, was affected with an Ulcer in the Throat, which resisted the effects of Mercury for a long time; while under treatment he cohabited with his Wife, who never had any Syphilitic complaint. The child which was the fruit of this connection, was attacked a few weeks after its birth, with a Syphilitic Ulcer in the Throat, in the same spot where the Father was affected. We are not in possession of sufficient authentic cases, to prove that the virus can be communicated by the Mother to the Foetus in Utero. We have the authority of very respectable men on both sides.— Dr Potter is of opinion that the Foetus may be affected in Utero. If the Disease is communicated during the passage of the child through the genitals, there will be a certain characteristic; but if the child was affected, previous to its expulsion from the Womb, the body will be covered with blotches, the skin will be deficient, also the Hair, & Nails, &c— Benj. Bell was also of this opinion; but J. Hunter, Swediaur, & others adhered to the opposite side of the question.—

After these preliminary remarks, we shall now proceed to a brief examination, of the most particular, and peculiar stages of this disease, with their mode of treatment, as recommended by the standard authors of the day, among whom, we take this opportunity of expressing our gratification, in being able

to class Professor Potter of the University of [illegible], whose admirable Lecture on this, as on many other subjects, has shed no little light upon those who have been so fortunate as to receive his instructions.

In the usual course of this Dis- the first intimation we have of its approach, is the appearance of a small ulcer on the glans-penis, or prepuce, which is termed a Chancre, the characteristics of which, are admirably described by Mr Hunter. It begins with an itching in the part, if the glans be affected, a small pimple appears, full of matter, without much hardness, or apparent inflammation, and with less mortification than when the prepuce is affected. nor are the Chancres when seated upon the glans, attended with as much pain, as those upon the prepuce; if the Chancre be upon the prepuce, or frenum, the inflammation is more considerable. The itching is gradually changed to pain. The surface of the prepuce is sometimes excoriated, and sometimes a small ulcer as on the glans. A thickening of the part comes on, which at first is very circumscribed, not affecting the other parts, nor diffusing itself gradually, and imperceptibly into the surrounding parts, but terminating rather abruptly. The base is hard, and the edges a little prominent; when it begins on the frenum, the part is often wholly destroyed. — More than one Chancre may exist at the same time. The specific matter discharged, is of a dirty hue, sometimes mixed blood. A Chancre may supervene in twenty four hours, or it may not appear until six weeks after connection, generally however, it appears three or four days after the part has been exposed.

If the poison be applied to the more dense skin, a pimple generally appears, which scabs, this on being rubbed off is succeeded by a larger one. The Urethra frequently sympathises with the part affected, and gives a tickling pain, especially in

making water. Often when there is a considerable loss of substance from ulceration, or sloughing, a profuse hemorrhage will ensue, which may prove very troublesome, & require the ligature, - this hemorrhage has completely cured the Dis. Phymosis, & Paraphymosis will frequently supervene, when the inflammation is permitted to extend, and will of course retard the cure. There are a number of eruptions which simulate Chancre, and which may be taken for it, and treated accordingly, by those not accustomed to see the Dis. These eruptions may proceed from heat, violent exercise, high living, frequent copulation &c. They will not improve by the use of Mercury, as Chancre, but are cured by astringent washes. When there is doubt existing as to the true nature of the Dis, the better plan is to wait for a few days, until it assumes its characteristic appearance; if venereal it will progress, if not, with cleanliness it will disappear. Chancre may assume in some instances an irregular appearance.

The treatment of Chancre. On the first appearance of Chancre, and before it has been absorbed into the system, it may be removed by dissection, or by caustic, and the person may escape the Dis., but this practice is objectionable, inasmuch as we have no criterion, by which to judge with precision, whether the virus has been absorbed or not. They generally heal readily when properly treated. Some preperation of Mercury should be administered internally, and the ulcer may be sprinkled with Calomel, - The sub muriate of Mercury, is perhaps as eligable a preperation, as we possess, if it produces ptyalism, it should be combined with Opium.

The corrosive sublimate in solution, has also been highly spoken of, and prefered by some. The Chancre should be kept clean with milk & water, and may be covered with Calomel alone, or Calomel combined with simple cerate. It is good practice, not to attempt to heal the Chancre, until there is a Mercurial action excited in the system, and then it will disappear spontaneously. When the edges become elevated, and callous, they should be touched with caustic, also when they become stationary, after the venereal taint has been corrected — If caustic be applied before the system is under the influence of Mercury, there is more danger of exciting a Bubo — There is a sphagadenic ulcer, which spreads over, and destroys the parts very rapidly; this can be cured by local astringents, such as Cinchona, - Sublimate - Oak bark, Lead &c — &c

Bubo is the next most general consequence of this Dis. It is a swelling of the inguinal, or axillary glands, although it may arise in any of the glands. It generally succeeds Chancre, but it may supervene with the appearance of Chancre. The matter is absorbed by the lymphatics, which convey it to the various parts of the system. The lymphatics often become inflamed, and swelled, and sometimes suppurate, and ulcerate; this inflammation, will however disappear, by any application which tends to lessen inflammation. Swellings of these glands often proceed from other causes, and should be carefully distinguished from those that arise from the venereal Dis — We should in the first place attempt to ascertain the cause, & even if

Sub Murias Hydro- so termed by Professor Potter-

there be Chancres, or any symptoms of Syphilis, enquire if Mercury has been applied to the parts previous to the swelling, for it will sometimes create it. Observe if there was no previous Dis-ease existing in the system, and be careful that you do not mistake it for, or rather confound it with, rupture, Lumbar-Abscess, or Aneurism of the Crural Artery. The Venereal may be distinguished from the sympathetic Bubo, by the former suppurating if not checked while the latter, seldom, or never will suppurate. Five, or six days, generally succeeds after Chancre, before the appearance of Bubo. Bubo generally suppurates in eight or ten days, if not checked by the Sampson, of the Mat-Med.+

The poison is not conveyed into the system generally, for some days after the Bubo has commenced forming. A Bubo commonly commences with a pain, followed by inflammation, and goes on to suppuration; the suppuration is slow, when checked by medicine, or retarded by a scrophulous tendency. Bubos sometimes become irregular and are consequently rendered more diffuse, and do not suppurate so readily. The Bubo is most commonly confined to one gland. There is no stationary hardness in them.

Treatment of Bubo. Mercury, here as in all the stages of Syphilis is to be viewed as our sheet anchor, it should be used internally to a sufficient extent, and also externally, together with Solution on the contiguous parts. Where the inflammation runs high, Bleeding, purging,

&c will be necessary. If the inflammation be of the Erysipelatous form, Belladonna will perhaps be best, but if Scrophulous, Opium, Hemlock, Digitalis &c

Vomiting, has been known to resolve Buboes — sometimes in spite of our efforts, Bubo will progress to suppuration, and then it will require more particular attention.

If it be considered proper to open the Bubo, it should be permitted to go on thinning the parts as long as possible, and then may be opened with the Lancet, or what is perhaps better, with Caustic, particularly when the Bubo is large, and there is a quantity of loose skin about it. After it has been opened, it should be dressed according to the state of the sore, at the same time using Mercury, internally, until the sore is healed When the edges become callous, or the ulcer indolent Caustic should be applied to it. Should the ulcer after a time present a clean, red, fleshy appearance, extreme tenderness, and a disposition to spread we must stop using Mercury, for it has now become Mercurial; and we must give Opium, Conium-Maculatum, &c, &c, &c, to allay irritability, and also attend to the state of the General system, which is too often neglected in such cases. ——

Of the Venereal sore Throat. After the absorption of the virus into the system, the most common course of the disease is ulcers of the Throat, Mouth, and Nose. It may succeed a Chancre without a Bubo, but more generally the glands become first affected. It may make its appearance in ten days, or not for some months after every symtome has dis-

= appeared) but this space of time only intervenes, when the Dis- has been suspended, (without being perfectly eradicated) by the injudicious use of Mercury, hence we see the prosperity, may the receipt, of continuing the use of Mercury for some time after the Dis- has vanished!

The true Venereal ulcer of the Throat, is a loss of substance, with a determined edge, foul, having thick white matter adhering to it which cannot be washed away.

They are first indicated by pain, and difficulty in deglutition, a sense of tickling in the parts, and may assume an erysipelatous appearance. Their progress is rapid unless checked by Mercury. There is a change in the voice, it becomes hoarse. They have a whitish colour.

There is much difficulty in describing them, yet the experienced eye will easily distinguish them, and a happy change may always be expected from the proper use of that invaluable metal Mercury. The ulcers may be compounded with others not of a Venereal taint, affecting the same parts, which may arise from the long use of Mercury, and also from Catarrh. When from Catarrh suppuration generally attends, the ulcers have a clean, and florid appearance, usually insensible. The Syphilitic forms on the surface, the others are deeper; the one will not be improved by granules, whilst the other will; the one has a viscid, tenacious secretion, the other has not; those Syphilitic will be more tumified. The Syphilitic ulcer will often change from one Pencil to the other with astonishing quickness. Temporary deafness may supervene

from inflammation of the Eustachian tube, but it will not be permanent unless some of the organs of hearing be involved. The ulcers are at first confined to the soft parts, but if permitted to progress, the bones contiguous will be affected.

We have now in a cursory manner taken a superficial view of Syphilis, and some of its most remarkable consequences, but were we to attempt to make a minute examination into the cause, origin &c of this Dis, and also, of all its sequale, it would require much more prolixity than a dissertation of this kind will admit of, and we must therefore close this disquisition, with the hope, that our esteemed Professors will not judge it with a critics severity.

An Inaugural Dissertation

On

Acute Hepatitis.

Submitted to the Examination

of the

Provost Trustees &c.

Medical Faculty

of the

University of Maryland.

For the Degree of Doctor of Medicine.

By

Thomas Harley

Pluvima imago Mortis.

March 22nd 1829

To

Doctor Horatio Claggett

The following pages are grealfully Inscribed By one who is indebted for unvarying kindness and regard, for the honour of my gaduation by whose knowledge and attention, rendered the capacity of obtaining the sweet comforts of your well wishing pupil

Your sincere frind
Thomas J Hartley

Introduction

I present my reflections upon the Subject of the following dissertation, not from any voluntary indulgence of a disposition to obtrude my immature thoughts upon the notice of those, who, I am well satisfied are much better qualified than I am, to examine accurately and reason justly but in compliance with a formal obligation imposed by the Laws and Wisdom of the institution whose favours I solicit.

Man a living object, composed of a complicated structure, divided and subdivided, into solids Fluids and semi fluids; consequently the locality of diseases are nominated to the part thus situated; as Phrenetis to the Brain and Hepatitis to the Liver.

The revolutions and improvements in the Science of Medicine, since the Days of Hypocrates far surpass any thing which falls under the cultivation of human art; But gradually and obvi

only have they pursued with unremitting efforts, to ascertain the correct pursuits of public benefits.

Rush and Cullen, antient in displaying their apprehensions of important truths and so celebrated in their declarations, was, I suppose considered as correct as could be at that time discovered, but some of our Modern Professional Men, have examined their supposed accuracies, with the most scrutinizing investigation and unravelled their errors to real satisfaction. Professor Potter of the University Maryland, endeavoured to destroy the fallacy in believing that after the deposition of a watery fluid in the Brain that an absorption of it cannot take place. A case which which fell under his care in the Baltimore Infirmary, in the year 1829. Supports his opinion, with any future destruction.

It was supposed in antient times that diseases was situated in the fluids of the human body, and Medicines were valuable, in proportion to their powers of changing or correcting the vitiated fluids

But Succeeding and more accurate observation having induced the belief, that Humeral Pathology was not founded upon sufficient grounds. Ever since the Days of Cullen the causes of the diseases have been perpetually undergoing an anilization. But still some remains in unpenetrable obscurity though diseases are increased or diminished a good deal by Age, Constitution and Climates, and the Causes which are effectual in producing diseases are hereditory and acquired.

Age has considerable power in influencing the Character of the diseas; As Phthisis for instance when hereditory generally lays its ravages on the Middle age as about 30 to 35 Years of age. This predisposition appears to exist with considerable influence about a certain degree of life and at that time a exciting cause makes obvious its peculiar diathesis

Apoplexy, can with the same degree of propriety be considered a disease of advance life but professor Potter in the course of his lectures

on the disease related a case of a Boy 4 years old who died with this disease; And I think that it is a disease of more frequent occurrence in Youth than is supposed. And many other diseases follows Age, as Gout Dyspepsia &c.

Climate, has also considerable power in governing the active Movements of some diseases, but it, acting as a cure in hereditory diseas, is not founded upon reason sufficient to Bias the illustrious observer but its palliating effects undoubted desirves attention, for evidently it prolongs life, and frequently in some diseases a final cure is obtained. The sufferer whilst labouring under Phthisis satisfactory shows to us its essential utility in preventing its immediate termination, and when it lays its violence upon the dilicate frame, the only palliating remedy of any great importance, is the removal to a warmer and regular Climate.

Constitution. The changes in which the constitution is liable to undergo. should invite the attentions of the observer. for to gain the practical utility of Med
ical means

The susceptibility of the constitution falling into
deseas, while in a weakened and worn out condi
tion, over the healthy and enjoyable, are manifested
by the weakened parts being more sensible to the
impression Made by the cause
The Deseases which are produced from acquire
ment are much more numerous and less dangerous
than hereditory deseases, but the causes are of a great
er variety fortunately easily of eradicating. They
act both locally and generally conequently the
desease may be either local or general, It may
it in the first instance be locals but the importance
of the part, may bring the general system into dera
ngment. Nervous and inflamitory deseases are
both brought on by acquirement and very frequent
by want of ppoite treatment, the former stimulates
the latter depleting.

Hepatitis Or Inflamation of the Liver.

It is a desease of extensive latitude, its situation and connection, displays a general observation of its essential healthy Character, and so serious and insidious are its movements, that if not early arrested will soon be insurmountable by Medical art. It calls for quick and powerful means to retard its progress, otherwise it will soon involve its important and connecting parts, either by immediate contact or Sympathetic communication.

The Liver is the largest gland or organ in the Human fabric; being even more voluminous than the longs when in a Collapse state. It serves as a point of termination, for the Abdominal Circulation of black Blood, in the same way, as the longs do for the general circulation of the same discription of black blood a peculiarity which does not appertain to any other organ in the body. the liver larger than the longs, but similar in its reception leaves it natural for us to suppose that its use is for more than the secretion of bile but it is not my intention to enter into the paths

al utility of this organ, only to express a belief that I believe, that it will be discovered by subsequent industry to possess some function more than the secretion of Bile. Evidently does it when Labouring under the least derangment illucidate its incapability of performing its real office, it is so important that it cannot be diseased without disturbing some other organ. The Sympathy between the Liver and Stomach calls for great attention, which in general language are nominated Gastro-Hepatic Sympathy: thus any indigestion in the Stomach, will frequently so disorder the Billiary Secretion, that the Stools will present in various Coulers frequently of a clay couler the Bowels sometimes Costive, evincing the deficiency of Bile; while the right Hypochondric (which is the region in which this gland is situated) when pressed upon a sensible pain is produced. On the other hand it is a matter of Common observation that Hepatic diseases, will produce an impairment in the Stomach; and if it is suffered to continue

Dyspepsia will be the secondary consequence

The connections between the Brain and Liver are obvious to the practitioner; in all derangements of the function or structure in the Billiary Apperatus, none presents to us a more regular diagnostic. than pain in the head or some Mental derangement. attending the disturbence of this important organ; and vise versa when the head receives a blow a disturbence of the Liver frequently follows, and sometimes finally terminates in an abcess. as M Biot an eminant Millitary Surgeon has promulgated.

A peculiarity appears to exist betwen the Liver and the lungs, by nervous communication but circuitous one it is formed by the Par ba gum and Sympathetic. the Par ba gum supplying the longs and stomach, it sending Branches to the Semilunar ganglion formed by the Sympathetic and this ganglion supplying the Liver and they holding correspondence, in this way the longs becomes effected, the stomach being secondarily effected passing thence to the longs. but much more frequently the Liver interfears, with its function. by

mechanical pressure from its Morbid enlargement.
The various grades of diseased Liver, and the infinite
variety attending it on the different grades with
innumerable Modifications, arising from the diver-
sified circumstances of situation Climate, predis-
position &c, affords a field worthy of investigation
and if I should fail in doing it ample justice
will not I hope be wandered at.

This disease as well as most other affections are
divided into Acute and Chronic, and some contro-
versy are still existing, concerning the parts effected
The peritoneum agreeable to some able men liable
to the acute form, be it so, I think occationally the
disease ~~may~~ of the pleura Costalis may extend to
the covering of the Liver but it cannot be a general thing
This is a disease of Hot Climates where it may just
by be considered endemic

Causes

The causes which inBolve the Liver into disease are
are many, Cold are the most frequent of inflamatory
effections, but not the most frequent of this disease

for it is more properally speaking a desease of warm Climates. However, I am inclined to believe that Cold may from its violent and sudden effects, so debilitate the organ that it will be in competent to recover itself without medical means, But not acting directly but indirectly, in producing, a sudden change in the temperture of the System, arising a greater volumn of Blood to the larger vessels of the internal organs, and at last becomes too much weakened, to relieve itself of this unusual supply of blood, finally congestion takes place creating an irritability in the part, and if not soon removed inflamation & fever follows, and requires a consideration worthy of attention for the effects produced by Cold are numerous, and the weakest part generally suffers from its violence. Sudden vicissitude of the wither from heat to cold has an invisible exciting cause in influencing this desease, not capable of withstanding the shock produced consequently lies prostrated from the injury done by the cause.

Heat is the principle cause of this desease in hot

Climates, and it very speedially runs into Suppuration for its inflamitory Career run with More activity Doctor Clark relates a case where Suppuration followed the inflamitory form ~~in~~ 5 Days after the desease took place. It does in this Country somtimes Suppurate but it is rather an unusual occurance.

Marsh Effluvia. There are a noxious principle existing in the air emanating from vegitable Matter which in a State of putrifaction, but More sensible is its effects when associated with intense heat, which is one of the constituents, in producing, Mars Effluvia Making a great and sudden impression upon the ~~Sy~~ ~~tem~~ Liver by impairing the Brain and nervous System thereby diminishing their vital energy evident by favours congestion of important organs (the Liver in perticular) for want of its nesessary stimuli congestion in the Liver takes place, and if not removed deseased finally takes place, but if promp and proper Means be properally employed in the first instance, will very probably restore the organ without any difficulty

by Liver acting with some durability and energy, may I think so impair the organ as not to be able to recover itself without Medical power. It is said by some that large increases the secretion of bile, liver has an opposite effect one producing an increased secretion the other diminished therfore its function is deranged at both times. we know that ~~any~~ suppression of any accustomed secretion is the cause of many diseases so effectual May this be in producing diseas the cause may perhaps easily removed and the function soon restored to its healthy condition. Cold and moisture applied partially to the Body may produce it, Excessive exercise, suppression of any accustomed evacuation may produce sedentary life, external violence as blows.

I have now presented to You all the ~~Mental~~ causes that my present reflection could gether and if I have not done them the justice which the old and experienced expected, a more minute explination will not I hope be requested from the young and inexperien

Again I offer to your Meritorious Understanding a few of the principle internal exciting Causes of Hepatic inflamation. The ingurgitation of inebriating Liquors and perticular ardent Spirits as the most general cause, but as Doctor Johnson expresses intemeance both of food and drink. If a mong labouring Classes of Society in this Country we see many person ingurgitating inebriating ~~Liquors~~ Matters, without any appearant ill effects, we are not thence to infer that the artizan and Mechanic and much less the sedentary the inactive and dissolate classes can persue the same practice with similar impunity; The Marked and decisive effects of intoxicating Liquors on the Liver and its secretion have been noticed in all ages and are familiar to vulgar observation. Intemperence in deet, food may not give or egan to the deseas but if any exist it will aggravate. ~~Hence~~ The indulgence in the table is one of the contributing Cause perticular Kinds of food are more calculated to disturb the organ than others as fatty and

and other rich diets. It very frequently arises from other deseases, as Pneumonia, Billious fever Gastritis &c. Agreeable to authors it arises it arises less ~~fr~~ now from Billious fever than it did formerly because the deseas is better treated, but when it does it is very obstinate to riele for the system is so much debititated, that it is not able to the evacuating plan.

Symptoms

The symptoms attending the acute form of Hepatitis which attends the capsule pain in the right Hypochondiac region shooting to the shoulding to the Back and Shoulders generally very acute considered to be more so than the substance itself, and increased by pressure, white and Dry Tongue, Hurried respiration and difficulty in lying on the left side an irregularity in the bowels, Jaundice occationally occurs, but it is not to be considered as a necessary concomitent of the deseas, an enlargment of the pancreas presing on the gall ducts and preventing

No usual discharge though there may be no present disease whatever, cough, it may be ~~sympathetically~~ produced by the inflamation extending to the Diaphragm and spreding along the pleura pulmonalis. the cough is sometimes loose at other times Dry, difficult respiration may be one of the consequences neither does it always produce cough, but far more frequently pain, in this manner and the increase of pain it may be distinguished from Pneumonia which might otherwise be overlooked for Hepatitis. My datids are consistent to Hepatitis but are never found agreeable to professor Potter, unless, inflamation has continued considerable time. They are not living independant organized Bodies, as has has been imagined. But seems to be the result of inflamations of Membranes attending perticular Cavities, The disease begins in its Membrane or Paranchima. It makes I presume little Moment in which part it begins for it is abundently obvious that in a large proportion of

cases the latter Structure becomes quick and to a great extent involved in deseas, and the Symptoms which Characterize the Substance of the Liver are I suppose by reason and sound judgment of the same as when its lining Membrane is deseased; but in addition to them some degree of swelling is to be felt externally, the pain is more obtuse, than when the capsule is effected, and is a more correct diagnosis, the urine is of a deep saffron Couler, the tongue is coated with a yellow feer the pulse frequent hard and somtimes full the skin hot and Dry; frequently accompanied with nausea and vomiting generally in the Morning after rising not from inflamation but from irritability in the Stomach. Wandering pains through the floating visera, a sensible pain at the end of the enciform cartilege of the Sternum when pressed upon, the Bowels som times costive at other times Symptoms of Diarrhea attending, Dr Potter tells us pain is in the right shoulder, when the right Lobe is effected, and pain in the left when the left

I consider it to be more uniform in pursueing
the two orders of the diseas seperately so I deem
it necessary to offer the treatment seperally.

Treatment

The treatment in the acute form are symila
to all other acute inflamitory affections, when
it occurs in cold or temperate climats and
when confined it may be considered as nearly
so to the investing Membrane of the Liver, it
it is to be conducted upon the same princi
ple of treatment as inflamation attending
the peritoneal covering lining the abdominal
or floating viscera.

Blood letting is the sheet anchor and should
be carried to a full extent; the cessation
of pain should be considered the measurm
ent of the quantity of Blood to be abstracted
the first Bleeding should be so large as to
make a sinsible impression upon the seve
erity of the diseas, then the next remedy I

should adopt would be a dose of Calcine Mag
nesia, to correct the acid which very seldom
fails to exist in the stomach, it then forming
a Neutral Salt; this then in a bout 30 min
utes followed by a strong dose of Callomel, giving
the liver a chance to unlock its confined
secretions, then if pain and inflamation con
tinues, repeat the Bleeding follow up the purg
ative treatment, with Neutral Salts, and the al
kaline preperations, and continue them until
the patient feels not a vestage of the desease
If debility should be too great for general blood
letting, leeches, and cupping should be used
the number of leeches and the quantity of Blood
to be abstracted are to be according to the stre
nght of the patient, our reliance for a recovery
in this form of deseas is obtain by the ac
tive interfearance of the Antiphlogistic regimen
Calomel if it was not for its stimulating
qualities would be the second best remedy for

Inflamitory affections, nevertheless in dependant
of its Stimulating I would depend more upon it
than our predecessors do for I consider an im
portent remedy in this deseas. Its effect on the Liver
is a specific one; it emits the billiary ducts their
bicia and depraved secretion which are confin
ed by the inflametory state of the organs, but its
proper and general reception is in the Chronic State
Purging is next best to bloodletting, If appears
to lessen inflamitory action they tend to remove
the torpor which exist in the portal System -
and lessen the quantity of Blood by evacuating
a serous fluid and thereby promote Billiary secre
tion, and to produce the saline preperations
appears to be the best, and at the same time pro
duces relaxation in the cutaneous System -
when the Bowels are obtinally costive. Gamb
oge combined with aloes acts very well, Scam
mony and Rhubarb answers a good purpose
Supervtartrate of potash, 4 Dr to a pint of water
and drank through the Days is an efficacious
remedy

and many other purgatives could be mentioned
cooling purgatives as the Saline and alkaline pre
perations are preferable to any others. when Blood
dletting and the prima via ~~are~~ have been ~~[illegible]~~
cleared out and fever and Dry Skin remain
the Sulphate of Magnesia combined with Tar
tar Emetic is I think worth attention 2 oz of the
former to 2 Grains of the latter put into 1 pint
of water, and a wine glass full taken every
2 hours, until diaphoresis are produced and this
kept up for several hours.
Emetic, I do not deem emetics in this desease
of any advantage unless the Stomach should
be overdistended or it being disturbed with
some indigestible food, otherwise it weakens
the organ agravates the deseas and disposes
it fall more readially under the secondary
consequence, Diaphoritic is I consider
useful in thes desease the assist the system
in releeving itself of the noxious principle and
assist nature in casting of by the cutaneous

emunctories which is not fit for the purpose of the animal economy which would if retained be a source of morbific irritation. Tartarize antimony is considered one of the best in inflammatory affections. It combined with Nitrate of potash is very good as 1/4 of the former to 10 of the latter every 2 hours — or Tartar in cold solution answers very well, Blood letting and saline preparations will both act in producing diaphoresis.—

Blisters should not be applyed as long as general Blood letting can be obtained but when this cannot be proceeded any further and continues they may then be advantageously resorted too; but they should be kept open for sometime if they should heal reapply them. At the same time these remedies are made us of particular attention should be paid to diet, all aliment of any indigestible nature must be dispensed with no strong meats no preparations of diet that has

in its composition fatty or oily substances, no vegitables of an indigestible nature. Drinks should be warm, avoid all spirituous liquors. and good pure country air should be had if can be obtained.

Suppuration will frequently follow after all Medical Skill it May ultimately terminate favourably or it may not. The Symptoms which Characterize this State is viz though adhesion to its surrounding parts may previously take place as to the Stomach, colon, Diaphragm, and Liver The Symptoms are a cessation of pain Rigors Hectic flush, and a evening fever, with an irregular State of the Bowels; If the abcess points towards the Diaphragm it will produce cough, and difficult respiration by its preventing the natural expansion of the chest, If towards the Stomach considerable gastric disturbence takes place producing irritability and finally vomiting to alarming degree. If it should

burst within the thorax and it be a large quantity and the patient much accustomed, will very likely destroy the patients life it May also burst within the abdominal walls and death may be its consequence, An adhesion between the suppurating portion of the intestines, generally the Colon or the Duodenum forms and the Matter of the abcess into the Cavity of the gut and is discharged by stool which is a favourable termination, but a very frequently an adhesion to the plema takes place and an external abcess Makes its appearance, which is a favorable way wether it be under the false Ribs or lower down in the abdomen it must be opened by art for in Most cases perhaps if left to spontaneous efforts of nature the Constitution would be [illegible] before the discharge could effected. The evacuation of the Matter should be followed by nutricious diet and pure fresh air, Cinchona Mineral acids and all other powerful tonics.

An

Inaugural Dissertation on

Uterine Hæmorrhage

Submitted

To the examination

of

The Provost

Trustees and Medical Faculty

of the

University of Maryland

For the Degree

of

Doctor of Medicine

By

John Hughlett

of

Virginia

April 6th 1829

To
The Professors
of
The University
of Maryland

Gentlemen

For the many valuable precepts I have received of you, the friendly admonition, and unremitted attention, you have manifested to me during the prosecution of my studies; permit me to dedicate this humble production, as a tribute of the highest respect for your talents, with my wishes for your happiness.

Jno Hufschmidt

Uterine Haemorrhage

The consideration of this subject is impor
t, both on account of the frequency
its occurrence, and the danger with
ich it is attended. All cases of
emorrhage from the uterus are attended
th danger but more particularly
thin the three last months of preg
ancy. When haemorrhages occur
ring the first six months of pregnancy
call them abortions. They may occur
any time from the sixth month till
bor commences, or during labor, before
birth of the child. They may take place
ring labor after the birth of the child, but
fore the abstraction of the placenta.
after the birth of the child and
moval of the placenta

ny accident which has a tendency
seperate a part or whole of the

placenta from the uterus; as external vio
lence of any kind blows, falls, &c may be
the remote cause of haemorrhage: or any
thing that has a tendency to accelerate
preordinately the general circulation.
The proximate cause of all haemorrhage
before the delivery of the placenta is a
seperation of some part or the whole of
that mass from the uterus: by which
means many large vessels are opened,
the uterus is unable to contract sufficiently to close them. There is a
peculiar situation of the placenta,
that is always attended with haemorrhage
during the last month or six weeks of
pregnancy, that is, when it is attached
over the os uteri; and the quantity

l blood lost will be more or less ac
ording to the situation of it & the size
l the vessels opened. It will be more con
siderable when the middle of the pla
centa is attached to the os uteri, than
when only a small portion of the edge
covers it. Hæmorrhages arising from the latter
cause are sometimes stopped by Coagulation
The symptoms of this disease are at first
light a few vessels only being torn a small
discharge of blood takes place a month or
6 weeks previous to labor; perhaps we
do not consider it of much importance
only that it is prudent to watch our
patients that labor may not take
place in our absence. Sometimes
the quantity of blood discharged is
very considerable & comes away at once,

immediately after this the woman
faints because not only a considerable
loss of blood has taken place, but because
it comes away suddenly and from
large vessels, which, therefore not being
completely full and not contracting
themselves immediately to the quantity con-
tained in them the circulation is for a
time impeded. When fainting supervenes,
the discharge is sometimes so completely
checked that the patient may not have
another return of it; but much more
commonly it is reproduced by a slight
cause. When a woman has had an haemor
rhage, whether it has appeared once or
several times her life is to be considered
in danger till she is delivered; for this
reason the patient should be situated
convenient to a physician or where

he might die before assistance could be obtained.

It sometimes happens when there is much hemorrhage, that there is no pain and these are the worst cases, because it clearly shows the contraction of the uterus which is so necessary to arrest the discharge has not taken place.

The dangers to be apprehended in this state of things are, First, the sudden destruction of the patient by the immoderate loss of blood, not depending on the absolute quantity, but on the suddenness with which it is evacuated. Secondly, from the repetition of hæmorrhage, because the small quantity evacuated at each time does not alarm the patient and is apt to lull the practitioner into a state of ease. The danger arising from the frequent

tution of hæmorrhage increases with every
return, for, in proportion to the excessive
ss of blood, are the powers of the Constitu-
ion weakened, and there will be less of
i- to Carry on the purposes of the system
he symptoms that denote immediate danger
re absence of pain, shivering, dilated state
of the Os uteri, with a slow weak pulse
wing a sharp stroke to the finger.
he countenance becomes pale and fallen
he blood having receded to the heart and
erge vessels. To these symptoms succeed
nquietude and restlessness symptoms
nexpected after the powers of life are
early exhausted by the loss of blood. After
his a continual fainting comes on one
st quickly succeeding another accompa-
ied by vomiting. To these succeed la-
borious breathing, sighing, Convulsions and
eath.

I shall now Consider the treatment of Uterine
Hæmorrhage, either as it occurs in the last
three months of pregnancy, before the birth
of the child and abstraction of the
placenta, or after the birth of the child and
abstraction of placenta.
Nature has given to animals certain powers
of restraining hæmorrhage which consist
in a diminution of the caliber of their
vessels, and the coagulation of blood
serving the purpose of plugs to the divided
extremities
This contractile power appears to be
more Considerable in the small vessels;
a wise provision of nature for were it
not for this property the slightest wounds
would be attended with alarming Conse
quences
In Uterine hæmorrhage when large vessels
are opened by the seperation, either of a part
or whole of the placenta, neither of these

owers is sufficient to arrest the discharge of
lood; since nature has bestowed on that
Viscus the power of Contracting its own fibres;
nd when this does not obtain the only
ndication of relief is to favor it by
rtificial means
hen haemorrhage occurs before labor or
fore a rupture of the membranes, from a
achment of a portion of the placenta
om the Os uteri, it has been recommend
d to introduce the finger by the side of the
placenta and rupture the membranes; The
aters being discharged, a contraction of the
terus comes on which stops the discharge,
nd sometimes expels the child without its
ature appearance; This may sometimes
ucceed: but should it not and the head
of the child descend in the pelvis
and the haemorrhage return it would
become necessary to open the head
of the child to save the life of the

nother; I therefore think it an inju
dicious practice
At any period during the three last
months of pregnancy if a woman be
attacked with hæmorrhage, we are di
rected to deliver; but if the os uteri
be not relaxed and she is not debilitated
by the loss of blood, it is not absolutely
necessary or proper to deliver; for we may
wait untill the os uteri is relaxed and
take that opportunity to deliver; remember
ing always however that waiting too long
is dangerous.
Very discharge of flood from the vagina during
the latter part of pregnancy can not be
called hæmorrhage. By flooding I mean
a sudden discharge of blood which
evidently weakens the patient, and in such
a case, whenever the os uteri begins to

ent soft and yielding the delivery
should be commenced by turning the
child. If the membranes be whole they com
monly break on the introduction of the hand
into the uterus and the waters are discharged
which generally checks the discharge. If
the haemorrhage is stopped and does not
return, the feet of the child must be
brought down, leaving the body to be ex
pelled by the efforts of nature.
But if the haemorrhage should not be
restrained by bringing down the feet
some irritation should be produced
in the Vagina by the fingers of the
practitioner. The difficulty of introducing
the hand will be in proportion to
the advancement of pregnancy, but
in all Cases it may be done

In some cases labor may have gone on very well when suddenly after the delivery of the child, and before the extraction of the placenta, a prodigious flow of blood comes on; in such cases should the flooding continue the placenta should be immediately taken away

After seperating the placenta before it is brought, always should not the uterus contract, it might be well to make a gentle friction against the sides of the uterus with the fingers, though this contraction generally takes place on the introduction of the hand

Hæmorrhages are not always checked by the delivery of both child and placenta. It is not uncommon where there is a strongly contracting uterus for a pint or quart of blood

to follow the placenta which was the whole quantity contained in the cavity of the uterus, but which does not produce debility or faintness; but when the discharge continues and debilitates the patient it is to be considered and treated as flooding

The most of these cases are produced by the officiousness of accouchers in the too early extraction of the placenta The placenta is generally thrown off in about twenty or twenty five minutes after the delivery of the child, and if it is expelled by the efforts of the uterus, no haemorrhage ensues.

When the placenta has been taken away and the patient is flooding recourse must be had to those means which are usually employed in Uterine haemorrhage. They consist in cold applications to the back and loins. The fire if any in the room should be

should be extinguished. The windows
raised and the room well ventilated
Her drink should be cool. Should these
remedies not succeed cold and astrin
gent injections should be thrown
into the uterus. The internal exhibition
of a citrate of lead has been so
highly recommended as to deserve
a trial. A compress on the abdomen
should be tried. In all cases but
more especially if the patient has had
any degree of flooding she must not
be moved for several hours after
the discharge is arrested. Care must be
taken when she is moved that
she is not put in an erect posture
because though the hemorrhage has been
restrained such measures may reproduce
it and sometimes though there has
been no flooding before or after labour
this imprudent step must produce
it.

Finis

Treatise on Ascites.

by T. Matthews
of Charles County Maryland

"Crescit indulgens sibi dirus Hydrops"

Horace

1829

1829

To the

Distinguished Surgeon, and Eminent Physician,

Dr. Thomas H. Wright,

as a demonstration of respect for his talents and acquirements,

The following Treatise is most respectfully dedicated — By the Author

West Woods.

Septr 1829

A Treatise &c.

'is a truth, which has long since been established, that the discovery of
e fact in a Science, tends more to facilitate its advancement, than all
l hypothetical Arguments and disquisitions of its learned and ingenious
tarists. This fact in Natural Philosophy is so self evident, that
' would be vanity in me to attempt to enforce it. In Medicine the
me is equally apparent; whence it has become my duty, in
ealing a Medical subject, to notice it, in justice to my theme,
at I may reap advantages it promises and has insured those who have
ceeded me. The Science of Medicine from Hypocrates, tho' comparatively
late date, has been veiled in obscurity and clouded by contradictions
What one would advance, an other would deny, and a doctrine, more
from the character of its promulgator, than its own weight, withstood
he torrent of opposition, or yielded to another which was perhaps
relong to experience its own fate. Every person will acknowledge the
spect which a great name in any Science commands; and we are all
qually sensible of the influence of passion, pride, and preconceived
inions.

And it is lamentable to contemplate, how men pre
minent in Science, should permit themselves to be so blinded by passion
at in their heated imagination they conceive opinions and in their vanity
mulgate & support, what in their calm & dispassionate moments they reject,
d, but for their pride, might publically recant. There are some, though,
o honestly err from inattention or an ill directed mind & industriously
labour to sustain some production of an active imagination instead of
earching for facts upon which to form a rational theory.

The doctrines of Hypocrates for a long time held the medical world in subjection, and his admirers blindly obedient followed his dictates without presuming to call them in question. The same may be said of the disciples of Galen and Paracelsus, who servilely pursued the footsteps of their masters; and like the Greek and Arabian Physicians carried on a medical warfare, the advantages of which, to the profession their works have sufficiently testified. From what has been advanced it may be anticipated that any thing urged in the sequel will not be dictated by an adherence to the doctrines of one man, or the dogmas of one School. All ages have been distinguished for men of genius and learning, and none has been more so than this. The discovery of the circulation of the blood has shed a light upon Medicine, and illuminated the Mind of the Physician; the improvements in Anatamy, Physiology, and Chemistry, have opened the highway to preeminence in Physic.

The moderns by their learning and industry in scrutinising the operations of Nature, particularly in the three great branches of Medicine already enumerated, have learned, and have taught, that no theory is to be received as established unless supported by facts. Upon a theory thus established, a rational practice can only be founded; any other leads to fallacy and empiricism.

Many diseases with which Mankind are afflicted, are so hidden in their nature and causes that they have eluded the ingenuity and discernment of Physicians; experience in such cases is our only resource. By a proper attention to the phenomena of diseases, and the practice of the most eminent men both antient and modern, we may be enabled to acquire correct principles, and establish a judicious plan of treatment.

The contradictory statements of the operation of remedies in different diseases, it is now sufficiently evident,

arise from the different stages of disease, and the different states of the system in which they are administered.

To no subject do I conceive the foregoing remarks more applicable than to that of which I propose to treat, and in the prosecution of which, I shall avail myself, so far as it may lay in my power, of the united experience of those who have favoured us with the products of their labours: And though I may not advance any thing new, which may throw light upon the Pathology of Dropsy, I shall endeavour to fulfil the requisition of the Institution by stating the result of my researches, and like the bee that takes the sweet and rejects the bitter, shall essay to select the good, and avoid, the evil principles & practices, of my predecessors.

The doctrine of absorption is one of the subjects upon which the opinions of Medical Men conflict: While the one party insist upon the exclusive agency of the lacteals and lymphatics in the process of absorption, the other contends that the veins also assist. It is thus apparent that we are as yet ignorant of the Physiology of the Absorbent System; and that the opinions heretofore advanced require some new and indisputable facts to substantiate them, or be received as vague and hypothetical

After making these prefatory remarks, to hazard a New theory unsupported by facts would certainly be the height of folly; Yet since the nature of my subject seems to require that my opinion should be expressed, I shall simply state it, by declaring my preference for that of Capillary Attraction, to all others hitherto advanced; not that it is the only one that can, or may be started, but with the belief that in the course of time, the ingenuity and perseverance of Physiologists will give rise to one and the only true one; and that it will be founded upon some of the simplest laws of Nature.

The fact that the lacteals are the channels through which the food, after going through

(L) Parr

the process of digestion, is received into the circulation, needs now no argument to prove it: and that they exercise the power of elective affinity, (the necessity of which, both, in the vegitable and animal acconomy hardly admits of a doubt.) seems likewise (to be conceded: That a verry poisonous article, the prussiate of potass after being introduced into the cavity of the intestines for the purpose of experiment, has been detected in them, has been intontestably proven.

Whether in this case, they exercise this power as it were instinctively in receiving the noxious article for the purpose of throwing it from the system by some of the emunctories; or. whether from morbid action induced from its presence, indiscriminately with the other wholsom ingesta, is not to be determined

By the above experiment it has been shown that the veins participate in no inconsiderable degree in the work of absorption. Their agency so far as it relates to the lesser circulation, to use the term of a learned Author(I), is to relieve the system of those substances, which from their Nature are unsuited to its demands; (and whose presence might produce an effect inimical to the animal acon-omy

The part they perform in the gre-ater circulation appears to be better understood, hence it is useless for me to enlarge upon it.

The Lymphatics, as their name implies, receive, and return into the Thoracic Duct, the fluid part of the blood already deposited in the cellular tissue of the body. That noxious matter is received into the system through the medium of the lymphatics is evinced by inoculation with the venereal (and small pox virus. &c. &c.

The Pathology of Dropsy

Since the pathology of the hydropic effusions of a particular cavity, is applicable to all the other kinds, I have deemed it best to treat of the Pathology of Dropsy generally.

To attribute dropsical effusions entirely to morbid action of the arterial exhalents I think we are hardly warranted; but that some part of the absorbent apparatus is in fault, perhaps oftener than is apprehended, I presume is reasonable to suppose; and that dropsy is sometimes the result of morbid function of both, is perhaps quite likely.

[illegible]

Etiology

As it cannot be expected that I can deliver the causes & symptoms of **Ascites** from actual experience, I shall take the liberty to relate them as laid down by the learned authors who have written upon this disease.

The causes which give rise to ascites are as various, if not more so than those of any other malady: They are ... jaundice, great evacuations of blood or serum, long continued intermittents, asthma, a rupture of some of the lymphatic vessels, obstructions in any of the viscera, most frequently a scirrhus liver, repelled eruptions, atonic gout, polypi of the heart, steatoma of the omentum, or any thing that obstructs the return of the venus blood, large quantities of debilitating liquors, or, in general whatever lessens the quantity of the crassamentum in the blood, and weaken the system.

But the immediate causes are either a rupture of the lymphatics, in which case the fluid appears whiter when tapping is performed, increased exhalation or diminished absorption. To which may be added peritoneal inflamation, both acute & chronic.

Hydatids have likewise been considered as one of its causes (III)

The following are the symptoms found to indicate ascites: A feeling of sluggishness, inactivity, dryness of the skin, oppression at the chest, cough diminution of

(IIII) *Colhoun in a note to Gregory's Practice of Physic*

the natural discharges costiveness, with a great swelling of the abdomen, the fluctuation is perceived by tapping on the belly:

As the collection of water becomes considerable, the symptoms of general debility are more decided; the face becomes pale and bloated, the thirst is immoderate, the skin dry and parched, the urine is scanty, thick, high coloured, and deposites a latiritious sediment, the pulse is quicker and the general system considerably affected (IIII)

With the remarks of Doct. Rush, that the state of the pulse in dropsy, has been too little attended to, I perfectly accord..

The tonic or inflamatory dropsy, is characterised by a hard full, and quick pulse; the atonic on the contrary with a weak and languid one —

Diagnosis

Pregnancy, it is said, has sometimes been mistaken for ascites; and that the diagnosis under certain circumstances may be difficult, is the case; but precipitancy, on the part of the practioner in any disease and particularly in ascites, is highly reprehensible; since time and a careful attention to the phenomena peculiar to both states will almost in every case, determine the matter

Tumours of the abdomen have sometimes been a cause of doubt, & perhaps a small degree of perplexity to the Physician, but their fixed and irregular feel to the touch, and their being confined to one part of the abdomen, will generally, sufficiently establish the Diagnosis.

Ovarial Dropsy, though of the abdomen, is yet so exclusively organic disease, and for the most part unconnected with effusions into the abdomen, the form which I have designed to treat, I shall not dilate upon it; but since it is sometimes an accompanyment, & when so presents some difficulty to Diagnosis, and bespeaks an unfavourable prognosis, it is but just that I should say a few words with regard to its discriminating characters.

The existance of ovarial dropsy

is not perceived till the disease has advanced very far: it may be known by the tumour being confined to one side, & being moveable when the patient is laid on his back

"

When dropsy is encisted and confined to the omentum, it is difficult to distinguish it, in general, when it is confined to a cyst, it is connected with a sound state of the constitution, without any of the general symtoms of dropsy, as adema in other parts."

"

Wind either in the cavity of the peritoneum or in the intestines, is distinguished by the elasticity of the tumour, the want of fluctuation, and in the last instance, by its variable states, and the relief felt from the occasional discharge of flatus."

Treatment

In the treatment of Ascites two great indications pre-sent themselves to the practioner; the one, to lessen vas-cular action, the other to give tone and energy to de-bilitated fibres.

By every enlightened Physi-cian the free use of the lancet in inflamatory species is most stremously urged, as without it the disease is peculiarly obstinate and difficult to manage

It is said by those who have read the works of Hypocrates that that great Man frequently resorted to it and highly recommended it. It has two, the sanction of the great names of Monro and Rush and by none has it been more par-ticularly insisted than the latter.

I myself have frequently witnessed its happy effects under the direction of that dis-tinguished Physician Doct. Wright of ~~this city~~ Baltimore

In the employment of this remedy, however great caution is necessary that it be not carried so far as to induce Syncope, from its liability to produce a dangerous degree of debility.

Is tending not only to lessen inflamatory symtoms, but likewise to excite the absorbents to action, hydragogue cathartics hold a conspicuous rank as remidiate agents in Ascites: but in those cases of it attended with diarrhœa, cathartics from their debilitating effects, are highly injurious.

As coroborates in this disease, experience affords us its invaluable testimony in favour of the following combinations of Sulp. Tart. Potass & Jalap. Sulp. Tart. Potass alone; used as a diet drink it is highly valuable.

Elaterium, too has been used with marked advantages in hydropic effusions: according to the following formula is perhaps the best mode of administering it. Rp. Elaterii gr. ij Spt. Nitr. Dul Zij oxym: Scill: Zfs- vin: colch: Zij- misca- dose Teaspoonful three or four times a day.

The croton emulsion in cases of obstinate constipation, is a remedy of considerable efficacy the following is a convenient formula Rp: Ol: Ricini Zj- ol: crot: Tigl: gtt ij- Gum acacia Zij- Sacch: alb: Zij- aqua simplex Ziv- Ft: Emuls: Spoonful every hour 'till it operates.

Ferriar's Anti Hydropic Tincture is a remedy of no inconsiderable efficacy, it is this: Rp. Oxy: colch:- oxy: Scill:- Tinct: nicot: Spt: Nitr: Dul: āā partes equales dose Teaspoonful four five or six times a day.

The black hellebore attracted notice as a cathartic in dropsy, and though proscribed by great names the weight of Authority seems

to lean its favour; the most approved form of administering it with this view is that of Bacher's pills viz: Rp: Ext: Ellebori nigri – Ext: myrrh: agos: āā ʒj – Pulv: Card: bened: ʒiij – M. ft: in pillulas divide āā gr: j.

The list of cathartics I deem superfluous to be extended any farther and shall proceed to notice the next class of remedies viz Emetics

The operations of Emetics in removing dropsical effusions, is explained in the following sensible manner by Doct Eberle – They lessen the action of the heart and arteries, and consequently diminish exhalation; and the action of the absorbents be unaltered, the quantity of the effused fluid is diminished – It is but right to remark that applies only to the inflamatory species. As an emetic I would give the preference to the preparations of antimony above all others

Under the head of those Medecines that promote absorption by moderating arterial excitement, Digitalis deserves to be noticed. Combined with Sub: mur: mercury, Squills, Nit: Potass, & Tart: Antim:, it is an invaluable diuretic, a good diaphoretic, & the best alternative.

Diaphoretics should likewise be had recourse to, both from their agency in establishing an equilibrium in the action of both the external and internal exhalents, and in throwing off the aqueous fluids.

Epispastics likewise from –

Inaugural Dissertation

On

Respiration

Submitted to
The Provost Trustees and Professors
of the
University of Maryland
For the Degree of
Doctor of Medicine
by
William H. Smith of Baltimore

1829

To

John Buckler M. D.

This inaugural Essay

is respectfully inscribed

by his friend and Pupil

William H. Smith

On Respiration

The function of respiration which is one of the most important in the animal economy is subservient to two important purposes; that of furnishing us with the means of vocally communicating & interchanging our ideas and that of restoring the blood which has lost its nutritious qualities and florid colour in the capillary vessels of the general system to its primitive arterial character thereby imparting to it the properties which are necessary to the maintenance of the multiplied and complicated operations which distinguish the animal organization. It is under the latter point of view that we propose to offer a few remarks.

The thorax is an air tight cavity divided in to two parts by the mediastinum and capable of dilatation in every direction, except on its dorsal aspect. The mechanical motions of the thorax are extremely easy to understand. From the oblique direction in which the ribs are articulated with the spine, when the intercostal muscles contract the capacity of the thorax is

enlarged forwards upwards and on both sides. But the ribs and their cartilages being of unequal lengths, their mobility is subject to considerable variation. the second rib being longer than the first, necessarily moves in the segment of a circle of larger dimensions than it, and consequently possesses a greater degree of mobility. The mobility of the ribs increases from the first to the seventh and decreases from the seventh to the last.

Haller thought the first rib motionless; but this is a manifest error, as during inspiration all the true ribs, from their attachment to the sternum must join more or less in the common motion upwards. In ordinary inspirations the intercostal muscles alone are employed to raise the ribs; but when the breathing is laborious the muscles of the neck attached to the sternum clavicles and scapulæ cooperate materially in the enlargement of the thoracic cavity. When the diaphragm is in a state of expansion it has a concave appearance when viewed from the abdomen; but in a state of contraction it approximates to a plane. by the contraction or descent of the diaphragm (as it is sometimes called) the capacity of the thorax is enlarged in the direction of the sternum. As the contraction of the intercostal muscles and

the diaphragm is simultaneous. all pressure is thus suddenly removed from the surface of the lungs which suddenly expand and suck in to their cells a quantity of air equal to the increased dimension of the thorax. No sooner are the lungs thus inflated than the muscles of inspiration begin to relax the expansion of the intercostal muscles subjects the lungs to pressure from the whole weight of the moving particles of the atmosphere; the expanded diaphragm is at the same moment made to recoil upon the lungs by the pressure of the atmosphere on the parietes of the abdomen, by this combined pressure on the lungs the air is again expelled. Mayow compared the motion of the lungs (and the thoracic parietes) to a bladder in the inside of a pair of bellows, the comparison would of have been more apt if the bladder contained a sponge to represent the air cells of the lungs as well as their expansibility. The suction of the air in to the lungs is called inspiration and its expulsion expiration; respiration is these two processes taken collectively. respiration is generally carried on without any effort of the will; but its frequency may for a short period be modified by volition.

Expiration though generally almost a passive motion may be accelerated by contracting the muscles of the abdomen and loins which are attached to the ribs as the lungs are protected from the pressure of the atmosphere, by the thoracic parietes; when an opening is made in to one division of the chest the air pushes between the pulmonary and costal pleura with a force which the

expansibility of the lungs occupying the wounded Cavity Cannot resist
and the lung Consequently Collapses. Notwithstanding the Collapse
of one lung respiration Can Continued in the remaining Sound one;
but if both sides of the chest are perforated asphyxia necessarily
ensues. Perforation of the mediastinum after one lung has Collap-
sed is attended with the same Consequences. The force with which
the lungs Collapse has been shown by Dr Carson to be equal to a
column of water of seven inches in a balloon &c. his experiments
prove that the lungs must be always subject to a mechanical
distending force while the Cavity of the thorax is entire.
In a healthy state the lungs are supple and pliant and follow the
movements of the parieties of the thorax the moment they enlarge this
Cavity In expiration they are propelled by the parieties of the thorax, be-
Cause the quantity and rapidity of expiration depends on the cap-
acity of the thoracic Cavity the lungs are at the same moment
relieved from the strain of distention. In those Cases where adhesion
has taken place between the pulmonary and Costal pleura it is
Conceivable that the thorax may be perforated in any part of the
adhesion without Collapse of the lung of the same side.
It is only in Cases of adhesion that protrusion of a
lung through a wound of the thorax Can occur which, some
authors say they have seen. When an opening is made in the chest
of a dog the air rushes Considerable, raised while rushing in to
this Cavity; and when the diaphragm, recoils upon the lungs

part of the air is again expelled with a sound like a sudden puff of air from the nozle of a pair of bellows. Collections of air either between the pleura or under the cellular membrane are proved by some vital process; but whether by absorption as alleged by professor Chaussier or by exhalation or by a combination of both methods does not seem established.

During inspiration a certain proportion of the blood must be removed from the periphery of the pulmonary arteries by the inflation of the lungs. It may therefore be presumed that the motion of the blood in them should then be slower than during expiration this conclusion is disputed by Dr Hall "I have found" says he "that the state of fulness or emptyness of the stomach and of all the hollow organs in general brings no apparent change in to their Circulation; that Consequently the blood passes through the vessels folded on themselves as when they are distended in every sense." the same author asserts that by exhausting the air from the lungs of a dog and opening the carotid artery at the same moment the blood flows as freely as when the lungs continue their function. Collections of fluids in the thorax have again and again been urged in support of the same opinion. But these objections it may be urged are none of them very Conclusive. It does not appear certain that any accurate estimate of the circulation of the lungs can be formed by gauging with the eye the jets of blood from the Carotid artery. It is not true that the expansion of hollow organs have no

influence on their arteries. The pudic artery is materially affected by the expansion of the penis; the arteries of the womb allso are greatly enlarged in gestation and Broussais maintains that the stomach is in the lowest state of inflamation during digestion. The expansion of the arteries in these organs in the above Circumstances is in part due to the Vital force; but in part also it seems attributable to mechanical distention and removal of incumbent pressure. But what is the effect of expansion of the lungs at birth. In the foetus the lungs are Collapsed in to Very small dimensions and the blood instead of passing wholly along the pulmonary artery passes in great part in to the aorta by the ductus arteriosus; but no sooner do the lungs expand at birth than blood Ceases to flow by the ductus arteriosus and rushes entirely along the branch of the pulmonary artery. It seems ~~[illegible]~~ that Cause and effect Cannot be more closely allied than this new direction of the blood from expansion of the lungs. Again in those Countries where it is Customary to treat hemiplegia with emetics paralysis of the sound side is often brought on by the long and Voilent expirations of Vomiting. Some of Bichats experiments would incline us to believe that the motion of the blood in the pulmonary Veins is accelerated by expiration. ~~[illegible]~~

The entrance of the blood in to the pulmonary air cells produces a

peculiar resisting sound singularly varied by age and disease; on the difference of this sound during inspiration and speaking, Laënec has continued to extend greatly our knowledge of the morbid changes which occur in all the thoracic viscera. The thorax when struck with the tapes of the fingers emits a hollow sound subject also to variation by disease from which useful information may be derived, when the stethascope is not at hand in the manner pointed out by Auenbrugger and Corvisart. But diagnosis of the Chest by percussion will most probably give place to the more certain method of exploration by mediate auscultation.

The Chemical changes which result from the inflation of the lungs is a subject of greater intricacy than the mechanism of respiration, partly from natural difficulties and partly from the theories with which it is beset. I shall Consider the fact the theories are of minor Consequence. The atmosphere is a gaseous Compound of about twenty one parts of oxygen seventy eight of azote and one of Carbonic acid. it is transparent and Colourless and envelopes the globe in a stratum Computed at about forty five miles. The weight of the atmosphere varies according to the state of the weather and the height at which the barometrical estimate is taken; at the level of the sea the pressure of the air raises a Column of mercury about thirty inches in Vacuo. About the temperature of 60° every degree of heat according to Sir G Shuckburgh increases the Volume

of atmospheric air 82 part. the expansion is however probably much above this valuation as it is rated higher by several french Chemists. Of the air received in to the lungs the azote is expired unaltered and the oxygen is Converted in to Carbonic acid When any given Quantity of oxygen Combines with Carbon the Volume of gas is not changed but its weight is increased one half by the addition of the Carbon. the quantity of Carbonic acid expired is therefore equal to that of the oxygen inspired as Messrs Allen and Pepys have proved in the Physo-logical Transactions of London. The belief that air is absorbed in the lungs is of great antiquity and was maintained also by Mayow Willis Borelli and a Crowd of others. Priestley and Lavoisier advocated successively this absorption of oxygen by the blood; but this assumption rests on no better evidence than the then imperfect analysis of Carbonic acid whose Composition Lavoisier estimated at seventy two of oxygen and twenty eight of Carbon; but which later Chemists Valued at two of oxygen and one of Carbon by Weight or to speak in the present language of Chemistry One atom of Carbon is Combined with two of oxygen. The surplus of oxygen which Lavoisier's analysis of respired air gave, he supposed was partly absorbed by the blood and the remainder Combined with hydrogen to form water.

Most fluids Contain a greater or less Quantity of the atmosph-
-eric gasses and there is not a doubt that the blood always
Contains some Carbonic acid; but of what has been Called
oxygenation of the blood there is no Valid proof; it is on the
Contrary refuted by direct experiment. Air expired from the
lungs Contains the same proportional quantity of oxygen as
before inspiration; this being the Case in what does the absor-
ption of oxygen Consist. Again by agitation of Venous blood
in a bottle Containing atmospheric air or oxygen gass the blood
assumes its bright arterial hue the oxygen is Changed in to
Carbonic acid but the Volume of air remains the same. ~~[illegible]~~
~~[illegible]~~ The Chem-
ical results and the Colouration of the blood being in every
respect the same as in respiration, is it sound reasoning to
ascribe to the blood the power of absorption, while it is Con-
-tained in the Veins which power is lost when it is abstrac-
-ted from them. Abernethy has even maintained that ex-
-pired air is increased in Volume. The absorption of oxygen
was intended to explain the generation of animal heat; but
as it has failed in this it will be as well to reject a theory
Contradicted by many facts and supported by none.
The obvious and principal effect of respiration is to abstract
the Carbon Contained in the Venous blood in its passage through

the Capillaries of the lungs; the blood is there soon decarbonized by respiration and fast oxygenized as the pneumatic physiologists have asserted. the quantity of Carbon thus taken from the blood of an ordinary sized man is Computed by Lavoisier at thirteen ounces in twenty four hours. this little all other physiological Calculations is Varied by accidental Circumstances The manner in which the oxygen of the air and the carbon of the blood come within the sphere of each others attraction is still very imperfectly understood. It is however altogether a chemical process quite independent of the Vital force; for the Coloration and decarbonization of the blood of a strangulated animal may easily be effected by forcible inflation of the lungs; this important fact is due to Lower The Combination of oxygen with the Carbon of the blood, not producing the same elevation of temperature which results from it in all other Circumstances is one of the strongest anomalies in Chemistry. the physical arrangement of the integral particles of Carbon strongly influences its chemical properties; how different the Combination of oxygen with the diamond Compared with the Carbon of the blood.

Analogy and induction would a priori lead us to expect an elevation of temperature in the lungs which is on the other hand refuted by facts and where analogy and facts are at issue the latter demand decided preference. Besides Carbon, respiration carries off from the lungs a Quantity of water in a state of Vapour in which form

traces of hydrogen have been detected. Sanctorious rated pulmonary exhalation at about half a pound and twenty four hours Halles at twenty ounces Abernethy at nine ounces and some of the experiments of Lavoisier and Seguin make it amount to two pounds, such discrepancies must invariably exist in physiological quantities ~~and in this hand~~ and on this head I shall once for all transcribe the opinion of Bichat: "But to calculate with Borelli the force of a muscle, with Keil the quickness of the blood or like Jurine Lavoisier &c the quantity of air which enters in to the lungs is to build a solid edifice upon rolling sand which must soon fall for want of a fix'd foundation" Physiological Researches of Bichat page 66. While the Circulation Continues in warm blooded animals respiration Cannot be long interrupted without extreme agony and imminent danger; when the Venous blood passes in to the left ventricle of the heart without giving off its Carbon by the air cells and is distributed to the other organs the action of the nervous system is speedily affected and muscular spasm and death ensue. This property of producing spasm possessed by the Carbon of the Venous blood seems to be instrumental in dilatation of the chest. When the Venous blood enters the Capilaries of the lungs its Carbon makes the muscles of inspiration Contract; the air is sucked in to the cells the Carbon assumes an aeriform state in Combining with oxygen, and the muscles of inspiration instantly expand on the removal of the Cause of their Contraction. the Con-

section of the phrenic and great Sympathetic nerves with those of the neck accounts for the Contraction of the muscles of the neck when deep inspirations are required. The extent of dilatation of the Chest Corresponds always with the Quantity of Carbon in the blood. after long fasting the breathing becomes short and the inspirations small, but after eating the breathing is quick and the inspiration deep. in the Cold blooded animals which pass the winter in a torpid state their respiration is then often imperceptible adapting itself to the scantiness of Carbon in their blood. The quicker the Venous blood arrives at the lungs the quicker are the inspirations. In inflamatory fevers when the blood abounds with Carbon and the Circulation is quick the number and depth of the inspirations are always augmented. When the entrance of the air in to the pulmonary Cells is impeded either by division of the pharynx or pressure upon the trachea, violent Contraction of the muscles of inspiration is equally produced. In whatever light the Carbon of the blood is viewed it appears the Cause of dilating the thorax. the irritation of one part often produces muscular Contraction in organs at a distance from it, thus Vomiting arises from tickling the fauces and sneezing from sternutatories applied to the nasal Cells in these Cases the Sympathy is more remote than between the pulmonary Capillaries and the muscles of inspiration.

Physiologists have been much at a loss to account

for the first inspiration; Haller explained it thus. he says that the fœtus being accustomed to swallow the liquor Amnii during gestation makes an effort to continue swallowing it at birth; but in place of this fluid air gets into its mouth, rushes down the trachea and inflates the lungs. this hypothesis has been refuted, the fœtus is not nourished in utero by the intestinal Canal; for if it were, the liquor Amnii would necessarily be mingled with excrement. monsters of various descriptions arrive at maturity of an ordinary fœtus without the possibility of swallowing the liquor Amnii or evacuation by the anus. Dr Harvey thought that the blood ceasing to flow by the ductus Arteriosus was the Cause of inspiration; this idea is to take the effect for the Cause. Dr Bostock seems to have had more philosophical notions regarding the first inspiration. in utero the fœtus is rolled up on itself and the lungs are collapsed but quite ready to expand when the incumbent pressure is removed. the pressure of the ribs upon the lung is partly removed by the uncoiling of the fœtus after birth; the diaphragm in place of being pushed upon them by the abdominal Viscera is relieved in some degree from this force by the body of the infant being placed in a straight position; a partial expansion of the lungs and the removal of pressure from them is of Course Synchronous But excepting this uncoiling of the fœtus at

birth ~~is there~~ no difference between the Cause of the first inspiration and any other. Whenever the Placenta is separated from the uterus or the umbilical Cord tied why should not the venous blood of an infant operate on the muscles of inspiration in the same manner as in the adult? If the unsailing of the fœtus account fully for the first inspiration why are the lungs of still-born infants not partially inflated by the development of birth?

An Inaugural Dissertation

on the Pulse

For the degree of Doctor of Medicine

Submitted to the examination of the Provost,

Professors and Trustees

of the University of Maryland by

Thomas Munroe
of Maryland

At a public commencement held in the City

of Baltimore on the 6th day of April

1829

The pulse fluttered – stopp'd – went on – throbb'd –
stopp'd again – moved – stopp'd –

Sterne.

—— —— Gelidus tardante senecta
Sanguis hebet —— ——

Virgil Æneid V.

An Inaugural Dissertation on the Pulse.

The Practice of Medicine is an arduous and important profession, arduous to the practitioner and important to the community in which he lives. Few perhaps of those who undertake its study, know the labours and fatigues, the anxieties and uneasiness which its practice will produce. Few also perhaps reflect sufficiently on the importance and responsibility of the station which they seek: No situation in life can be more critical and interesting to the feelings, none more momentous and of greater responsibility than this. Considerations such as these alone should urge all who devote themselves to the study of medicine, to pursue their object with diligence and atten-

tion, since so much may be committed to their charge.
The Practice of Medicine includes the discerning and distinguishing, the preventing and curing of diseases; for these purposes it is necessary to have a knowledge, as far as attainable, of the structure, actions and functions of the human body; of the changes produced in it in diseases; and of the means or powers by which it may be operated upon to correct these changes. A perfect knowledge of all these particulars cannot be obtained; it is nevertheless highly important to pursue them as far as possible. In the wide range of Physiology, Pathology and Therapeutics, the subjects of consideration are numerous and interesting, and in the practical application of the branches of medicine to the cure of diseases, the symptoms or signs by which diseases are pointed out must be a primary object of attention. Among these various signs or symptoms of disease, those

indicated by the pulse hold an usefull place and I have therefore chosen it for the subject of this dissertation, conscious of its utility as a means of discerning and curing diseases. A knowledge therefore of it must be considered an acquisition eminently usefull to every one who wishes to obtain an acquaintance with the affections of the human body. Indeed it has been called a Nosometer which gives information of all that is going on within the body; this is true in a great degree: it makes known the force of contraction of the heart, its weakness, its regularity, irregularity and quickness and all its different modifications. The pulse being thus the index of the heart, must inform us of the manner in which the body is affected by diseases. It is true it has been called "res fallacissima" and it may be an uncertain source of indication to those who have not an accurate knowledge of it, yet those who do possess it, know

its importance and regret not the labour it may have cost them, even if, as has been said, it be a servitude of several years severe attention to it. The manner in which the pulse is produced is yet undecided; it has been supposed to be caused by the alternate contraction and dilatation of the arteries or by the loco motion of them or finally by the pressure upon an artery producing an obstruction to the flow of blood during the contraction of the heart. The part also performed by the arteries in the circulation of the blood has consequently been and still is a litigated point. While some assert that they are passive in the circulation, others allow them independant contractility and muscularity which they exert of themselves: others affirm that they do dilate and contract alternately, but that these phenomena are only the "effect of the elasticity of their walls put in play by the blood which is continually injected into their cavity by the heart." This latter opinion appears to be correct both

from experiment and anatomy. An experiment by Magendie shews that if an artery be laid bare and compressed between the fingers so as to intercept the current of blood, the artery below the compression will gradually diminish in volume; if then the compression be removed and the blood be permitted to enter, it will distend the artery at each contraction of the ventricle untill it re-assumes its former dimensions. Anatomy exhibits in the arteries three proper coats; the external, very strong and elastic: the internal very thin and smooth; and the middle with circular fibres, very elastic, that has been supposed to be muscular, but possesses nothing of this character. It would seem therefore that the pulse is produced by a dilatation of the arteries in those that are straight, accompanied by a tendency to straighten in those that are flexous, under the influence of the contraction of the heart.

The pulse is influenced even in the healthy state by numerous circumstances, such as age, temperament, habit of body, cli-

mate, sex, by rest and exercise &c. The number of pulsations is greater according as the person is younger, for as the age so is the strength and in childhood there is weakness combined with irritability: the heart therefore contracts more frequently and not being completely emptied, is sooner filled again and excited to contraction. At birth the pulse beats from 130 to 140 times in a minute; at one year from 120 to 130: at two years from 100 to 110; at three years from 90 to 100: at seven from 85 to 90; at which it remains for some time; at fourteen it is from 80 to 85; at adult age generally from 70 to 80: at first old age or from 50 to 60 years it is from 65 to 75; and thence 60 till death. These numbers are subject to variations from the causes above mentioned and from idiosyncracies. In the sanguine temperament a natural pulse is 80 or 85: in the melancholy often from 55 to 65 in a minute. Habit of body also influences the pulse, it is more frequent in persons of short stature, great muscular strength and

strong passions of mind. In corpulent persons it is naturally weak. Climate modifies the pulse, as in the colds of Lapland it is about 40 and in some parts of Asia transcends an hundred. In women the pulse is more frequent by 6 or 8 pulsations than in men. During digestion it beats 8 or 10 strokes more than natural and is accelerated in a remarkable manner by exercise and any sudden exertion of body. It is more frequent in a standing than in a sitting posture and in the latter than in the recumbent. The affections of the mind have also a great influence upon the pulse and many of them accelerate it. It is well known how even a slight emotion modifies it. Anger, ambition, revenge and others increase it: the depressing passions such as grief, fear, and remorse and some others diminish it. It is fuller and slower in sleeping than in waking. Rest and the avoidance of light and noise will diminish the pulse considerably. It is said to be slower in the ~~European~~ African than in the European. The pulse has

also three exacerbations every day: the first occurs about 8 o'clock in the forenoon and remits at 10: the second occurs at 12 and remits about 1 or 2; and the third comes on at 6 or 7 and does not completely go off till about 2 o'clock in the morning. The evening exacerbations are most distinct, the mid-day one inconsiderable. These exacerbations of the pulse are called by some febrile and are marked sometimes, in weak constitutions, by rigors and increased heat, but they are generally announced by an increased frequency alone of the pulse. The period of the morning exacerbation is generally the time of the accession of fevers of the tertian type: that of the evening marks the period of those of the quartan character. It has been said that there is a gradual diminution of the frequency of the pulse from morning till night, commencing early in the morning (about 3 A. M.) and ceasing about midnight: But this opinion does not agree with more general obser-

vations: in the morning when the body has been refreshed by repose and strengthed, and the functions are performed with vigour, then the contractions of the heart will be stronger and consequently less numerous than in the evening, when the body is exhausted comparatively by the exercise of its various functions through the day, which become weaker in their actions and consequently the contractions of the heart more numerous and proportionally weaker. But the modifications of the pulse by disease are those which chiefly concern the Physician and which are most interesting to him. To derive just conclusions from the morbid pulse, it is necessary to know its natural and healthy state, and to pay attention to the manner in which it should be felt in disease. A healthy pulse is open, free from all resistance and equable or at equal intervals between each stroke; it may be strong and firm, yet in such cases there is always a softness. The following directions for feeling the pulse have been given viz: 1 Let the arm be pla-

ced in a position in which all the muscles which move it shall be relaxed and let it be free from the pressure of the body.

2. Feel the pulse in both arms; sometimes the artery divides above the wrist in one arm, which circumstance might lead to wrong conclusions.

3. Apply all the fingers of one hand, when practicable, to the pulse and feel the pulse of the right hand with the fingers of the left and of the left with the right.

4. Feel the pulse at intervals or upon entering and leaving the room, when you suspect its force may be varied by causes not connected with the disease.

5. Feel the pulsations of the arteries in the temples and neck, when the pulse is depressed or imperceptible at the wrist.

6. Request silence in a sick room and close your eyes in difficult cases: allowance should be made in all cases for circumstances foreign to the disease which might affect the pulse. It may be counted with accuracy till it reaches one hundred

and forty or fifty strokes in a minute; but all above this is conjecture, and the number unimportant, as one hundred and forty indicate great danger. The chief objects of inquiry respecting the pulse are its frequency and slowness, its strength and weakness, hardness and softness, fullness and smallness and quickness and regularity. A constant pulse of 90 in a minute, increased sometimes to 10 or 15 above this, indicates a considerable irritation in the system and some danger: To exceed one hundred and twenty is highly dangerous, whatever may be the other symptoms. A pulse from rest and the avoidance of internal and external stimulants may be very slow, even down to 50 in a minute: Such a degree however in disease points out extreme danger; it shews great insensibility of the system, and if accompanied with stupor, a compression of the brain, which may end fatally if not soon relieved, it has been observed below 40 after an apoplectic fit. While the number of strokes remains the same, the pulse may be strong and hard or quick and apparently weak: a strong firm =

pulse, as has been observed before, is a mark of high health, but it has always, if healthy, a degree of softness: it points out the vigour of the heart and consequently of the system, unless the heart labours under a local affection. The weak pulse is a sign of debility, either real or apparent only: in the latter it is occasioned by causes so active as to depress the system below the point of re-action and the pulse is said to be depressed. It is sometimes preternaturally frequent or slow and attended with interruptions. It is raised by bene section and occurs in affections of the Brain, Heart, Stomach and Bowels more frequently than in diseases of other parts of the body. The pulse of debility is frequent, easily compressed and shews the weakness of the heart and system. The frequent pulse has been mentioned already; there is a distinction between it and the quick or smart pulse; the former refers to the number of pulsations in a minute, the is that in which the systole is completed in less time than the diastole and cannot be well marked but in a pulse

of moderate frequency, as 90 in a minute, which would require the distinction of the 1/150th part of a minute. This more rapid contraction is caused by the presence of a stimulus, but when it occurs in low fevers, in mortification, in hectics and where a stimulus is combined with debility, it implies (according to Haller) a spasmodic contraction of the arteries when the ventricle is not yet full. There is a difference also between the rare or thin and the slow pulse: the former is when the artery strikes the finger as if it was not full and the dilatation slow and apparently incomplete; the artery seems to hang on the finger, for being filled in slow succession the stroke is longer continued: it often attends asthmatic cases and enlargement of some part of the heart or large vessels and occurs in the last stage of some low fevers. If the pulse be hard and strike the finger like a tense chord, approaching to what is called a wireness, a tendency to disease is present, called the inflammatory diathesis, which consists in a morbidly increased tone of the arterial system, and if at the same

time the pulse be increased in frequency, it indicates inflamma-
tory fever. Softness of the pulse is opposed to the hardness and as
the latter shews an increased tone, so the former points out
a diminished or less powerfull resistance and is frequently
dangerous. There is an obstruction and freedom of the pulse
which are produced by an increased and diminished tone
of the capillaries and are less easily discovered, except by
a delicate touch. Fullness and smallness can be obviously
distinguished and signify the greater or less quantity of blood
circulating in the system, which with other signs often af-
ford usefull indications. The intermitting pulse is a symptom
of debility and diminished irritability, for the heart when
less irritable, is excited only by over distention, and when at
the same time weak, cannot remove the blood at one effort.
It occurs in organic affections of the heart, in asthma and with
many persons is natural, in whom during fevers it becomes reg-
lar. In many instances however it is owing to fullness of the
stomach and bowels and often to agitation of mind.

In this there is a cessation of pulsation after every 1, 2, 3, 4th stroke or more. The rebounding pulse is a similar nature to the latter and arises from obstruction; it occurs sometimes in aneurism of the aorta, in hydrothorax and ossification of the valves of the heart. This pulse consists in one, two or three rapid pulsations with a long interval. Certain affections of the arteries may influence the pulse so as to render it different in the different arteries and there some cases in which the pulse does not sympathise: this may generally be referred to a diseased state of the artery at the wrist or want of sympathy in the heart. Sometimes, as when life is extinguished by causes not affecting the circulation, the pulse remains natural almost to the hour of death. The pulse wholly stopped is not always a fatal symptom, tho' it is desperate, if it remain so long.

The most simple modifications of the pulse have now been mentioned, but no one of these ever occurs alone: they are combined together, as full and frequent, full and quick sometimes,

depressed and weak, slow and intermitting, slow and weak, small and weak, or in more numerous modifications, as full, strong and frequent at the same time.

From these states of the pulse alone, no practical conclusions should be drawn, as it is unsafe to judge what course to pursue from them unconnected with other symptoms. No general and fixed rules then can be given for the abstraction of blood which will apply in all cases. Dr Rush has pointed out several states of the pulse in which blood-letting should be used, and these include almost every condition of it which may occur: if these rules be followed blindly by persons whose acquaintance with the pulse is not so accurate as that possessed by Dr Rush, it is evident much harm may be done. A great variety of pulses have been mentioned by writers, each of which was to point out a different disease; such an application or appropriation is however arbitrary. Dr Rush has enumerated several varieties, with distinct names derived chiefly from the diseases to which they are applied, yet scarcely one of them is peculiar to any one single

disease, but may occur also in others. The inutility, at least, of such a course is obvious, it leads to no definite practice and may prove injurious by drawing the attention from other important signs. Nothing more than some of the most simple conditions of the pulse can be made known by writing and its indications may be sometimes in a degree uncertain to the experienced. A perfect knowledge of it is acquired only by long experience and attention to it and will amply reward the labour of its acquisition by the superiority it gives to its possessor.

Dissertatio
Inauguralis Medica
de
Rheumatismo Acuto,
quam
Examini
Præfecti, et Facultatis Medicæ
Academiæ Terræ Mariæ,
pro
Gradu Doctoris Medecinæ
submittit
Andreas O. F. Lynch
Pennsylvaniensis.
Anno
MDCCCXXIX.

Reverendo

Johanne Allen,

viro eruditissimo,

Hasce studiorum suorum primitias,

Existimationis Testimonium,

exiguum, sed sincerum

Offert, dat, dedicatque,

Auctor.

Dissertatio Inauguralis Medica, de Rheumatismo Acuto.

Omnium morborum quibus genus humanum subjicitur, nulli frequentius occurrere solent, aut gravem medici curam sibi magis postulare debent, quam morbus de quo in paginis sequentibus tractaturus sum. Diu hic morbus neglectus fuit donec Sydenhamus millesimo sexcentesimo et septuagesimo anno historiam ejus primus accurate descripsit, et diagnosin sagaciter explanavit.

Tullemus hunc morbum in Nosologiam ejus

ad classem pyrexiarum et ordinem phlegmasiarum retulit, et in verbis sequentibus bene definivit.

Morbus ab externa et plerumque evidente causa; pyrexia; dolor circa articulos, musculorum tractum sequens, genua, et reliquos majores, potius quam pedum vel manuum articulos, infestans, calore externo auctus.

Ille auctor insignis species duas enumeravit, nimirum acutum et chronicum Rheumatismum, de quorum priori scribere conabor.

Morbi Historia

Sub calo frigido in vere et autumno Rheumatismus maxime apparet; minus sape in hyemene dum frigus alicujus momenti aut durationis est; verumtamen omne tempestate ami, ejus exempla non desunt.

Hos pene in labore corporeo occupatos, et juvenes robustos ab anno circiter duodecimo, ~~et~~ adtrigesimum quintum ætatis invadit.

Ex magna parte pyrexia symptomatis valde notatis incipit; sicuti algore, calore acuto insecuto, lassitudine, et languore; anorexia et constipatione; lingua sicca et albida; ~~ad faciem~~ sanguinis ~~et~~ ad faciem fluxu; atque pulsu pleno, valido, duroque.

Dolores acuti cruciantes, articulos vexant, majores præcipue, ut humores, carpos, genua, et coxas.

Absente pyrexia, dolor in uno tantummodo artu sentitur; et eadem præsente, plures simul afficiuntur artus. —— Per dies multos sedem mutat, interdum ad eos quondam affectos redit.

Dolores lascinantes fabricam musculorum non=

nunquam corripiunt, qui tractum musculorum se-
quentur, ab uno ad alterum artum discurrentes,
atque musculorum partium affectarum actione
multum augentur. Pyrexia exacerbatis hunc
morbum comitatur, per noctem gravescens;
quo tempore dolores gradum violentiorem assu-
munt, et caloris ~~extor~~ applicatione externi
intendi videntur.

Aliquando artus affecti rubescunt; et hunc
ruborem sequitur tumefactio, qua saepe do-
lores allevantur; sed mox ad alios vel eos
primo cruciatos, revertunt. In hoc morbo su-
dor a liquis matura obvenit; sed dolores perra-
ro mitigat, aut crisin demonstrat.

Nonnihil a consuetudine alienum apparet,
membra dolore affecta sicca remanere, dum
sudor simul in caterum corpus scatet.

Sanguis missus post repigeationem, portionem glutinis super crassamentum ostendit, ut in aliis Phlegmasiis videtur.

Progrediente morbo, sudores copiosi, et generales sua sponte irrumpentes, sape morbum tollunt; secretio urinæ copiosa sedimentum purpuraceo-lateritium deponentis, haemorrhagia, aut per cutem eruptio, inter symptomata fausta computantur. Tametsi pene semper cum inflammatione partium quarumdam stipatus est Rheumatismus, rarissime tamen si unquam, in suppuratione terminat.

Nonnunquam per metastasin, pulmones, cor, cerebrum, aut medulla spinalis, corripiuntur; et in hujusmodi casibus eventus sape infaustissimus est: sed feliciter ha

translationes haud frequenter evenerunt.

Causæ Prædisponentes. - Temperamentum sanguineum, vel constitutio corporis plena causis levibus facile irritanda; vita in desidia acta; plethora; in vino vel aliis liquoribus spirituosis nimium indulgentia; intemperantia, qua mentis et corporis facultates minuuntur; labor constans cuique vires inæquales invenitur; ~~labor constans~~ suppressio quæ evacuationum solitarum, inter plurimas causas quæ huic morbo proclivitatem dant, numerantur.

Quos semel infestavit Rheumatismus, tametsi removeatur, itinerationibus tamen ejus molestissimis plerumque obnoxii fiunt; hinc ut causa prædisponens operari juste existimatur.

Causa Excitantes.

Frigus praesertim cum humore conjunctum, et quacunque modo corpori insolito calenti admotum, aut frigori corpus partim expositum, aliis interim partibus calefactis, vim demum frigoris esse causam Rheumatismi frequentissime excitantem, omnibus artis nostrae Medicis concordissime concessum est.

Causa Proxima. Quod ad causam hujus morbi proximam attinet, sententiae variae in lucem prodierunt. Boerhaave cum Discipulis ejus, eam lentorem fluidum esse, qui vasa partis obstruxerint, affirmaverunt; dum alii humorum acrimoniam tionem ejus ascribere assueti sunt; Cullenus Rheumatismi causam acuti antecedentem, ac alias phlegmasias non e stimulo directo

pendentibus, pro eandem esse, natus est.
Frigus (quod causa frequentissima) vasa articulorum maxime afficere judicat; quippe quibus membrana cellularis tenuior sit quam partium membranarum interjacentium. Praeterea frigus pascula extrema summae cutis constringere, nec non tonum vel diathesin phlogisticam in cursu augere, unde impetus sanguinis auctus est; simul remissus ejus libero transitui ideoque dolor, et inflammatio.
Multi hodie eandem opinionem ~~tenent~~ cum Sydenhamo tenent, qui, Rheumatismum peculiarem inflammationem speciem despicivit, partes fibrosas fabricae afficientem, frequentissime vero membranas synoviales, multum irritationis sympathetica, et febris inflammatoriae in corpore cientem.

Diagnosin. Morbi quibuscum Rheumatismus confundi potest, sunt Podagra, Pneumonia, aut Enteritis.

Habitu corporis ægri, aciditate, et dyspepsia; quæ fere semper paroxysmum podagræ procedunt, propensione hereditaria, ætate ægri, sedeque morbi ~~fo~~ Podagra designatur; articulos quoque minores, et unum fere simul, veluti pollicem, vel digitos pedum, manuumve vexat; atque ad divites fere solos attinet: Attamen Rheumatismum nonnunquam et Podagram conjungi in eodem homine accidit, tumque æger miserus impetu utriusque conjuncto plurimum affligitur.

A Pneumonia, dolore musculorum intercostalium magis externe sito, sub motu trunci laterali

acuto, et tussis absentia, dignoscitur.
In Pneumonia respiratio difficilior est, et tussis gravis aegrum miserrime torquet.
Hisce Symptomatis ab Enteritide hunc morbum Medici facile distinguunt, scilicet alvo purgantibus cedente, vomitu nullo, et dolore sub pressura non crescente.
In formam Rheumatismi acutam et chronicam, modus discriminationis perdifficilis est, inter se adeo commiscentur. — Indicus tamen, sequentibus, prior a posteriori dignoscatur; doloribus haud raro sedem permutantibus, per noctem et calore lecti, vel applicatione caloris cujuslibet externi auctis. — Pyrexia paroxismis vespertinis comitata; et tumore et articulorum maxime rubore.
Non tam forma sub acuta ac chronica senes

invalidosque invadere cognoscitur.

Prognosis. Rheumatismus quamvis morbus permolestus ~~est~~ et dolens ad exitum fatalem perraro tenditj, nisi quum ad organum vitale, ut ad cor, et pulmones, transfertur, aut cum inflammatione generalis, nisi remediis idoneis ex tempore submoveatur accidit; nam tunc in periculo eger precipitatur, et recuperationis spes, pene semper minima est. — Sed si contra, sudor levis, et copiosus, super totum corpus sese diffundit, si sedimentum urina lateritium deponit, si alvus sua sponte relaxatur, si situs et symptomata febrilia extenuantur, et terminatio morbi felix expectanda est, et Prognosin beatam pronunciare liceat.

Curatio In hunc morbum molestum tractando, inflammationem generalem compescere primum consilium est, quod attentionem Medici gravissimam sibi jure postulat.
Ad hoc efficiendum regimen antiphlogisticum, imprimis necessarium videtur.
Eadem ex sententia, libera sanguinis missio, pro signorum violentia, ætate viribus ægri apte respondens, juvabit. — Quando pulsus plenus, validus, et durus est, habitus corporis robustus, et calor acutus, e potentissimis et simul efficacissimis remediis, in Rheumatismum acutum subigendo, venesectio est.
Si primo morbi stadio sanguis post refrigerationem, crustam flavam, vel ~~oblam~~ albam ostendit, doloribus eodem tempore cruciantibus,

necnon frequenti actione vasorum perstante, eam iterare adeo usque pulsus reductio salutaris demonstretur, utilissimum erit. Sanguinis detractio quoque, ex cœlo sub quo æger degit, plurimum pendere videtur.

Si titubanter facta sit, parvo ex orificio, tarde distillat sanguis, nec ulla inflammationis symptomata indicat. Idem accidit, cum in vasis minime profundis sanguis recipitur; quum, si ex vulnere pleno vivo in vasa proposito apta fluat, tunicam albam fere semper formabit; in spatio temporis brevi detrahetur quantitas major et inflammatio citius tolletur.

Cavendum est, tamen ne plus æquo sanguinis detractio augeatur, utpote quod debilitatem gignere systematicam, ægri recuperationem

protrahere, et speciem chronicam sæpe inducere
potest. —— Applicatione hirundinum
topica, cucurbitulis, et scarrificatione, in
locum phlebotomiæ substitutis, ubi constitutio imbecilis, necnon irritabilis est, ortum tumefactione, dolore, et rubore, per stamina; signa doloris violentia persæpe mutuum allevantur.

Digitalis administratio in dosibus a guttis decem ad viginti usque, ex tinctura, secunda quaque hora repetenda, vim cordis minuendo; ~~sanguinis missione semel~~ optimos effectus haud infrequenter nobis præbuit.

Si alvus adstricta est, aliquo leni et refrigerante cathartico alvum ducere, maxime utile videtur; quale oleum Ricini, Potassæ super

tartias, vel salis medii; adhibenda quidem adeo ut unam vel duas dejectiones in die efficiant. Per totum morbi cursum alvum reddere nunquam negligentur.

Diaphoretica, ubi aegri constitutio debilis est, et ulterius et sanguinem detrahere non opus, post purgationem magno cum fructu adhibeantur:

In hanc sententiam Ipecacuanha et Opii optime accommodatur; in doribus a granis sex ad decem usque vel plura, quinta vel sexta quaque hora adhibeatur, sic ut, sudorem copiosum producat; cum elicere potibus calidis, blandis diluentibus, aliisque similibus injectis, quibus addatur aqua acetatis Ammoniae, vel tinctura Opii Ammoniata, ex parva quantitate, et intervallis brevibus sumendis, aegrum oportet. Per spatium quadraginta octo horarum, vel plurimum, si opus

sit, stadium sudorificum continuetur.

Prius sese ostendere quam sudor incipit, potus ægro dari nequeat, ne superveniat vomitus, qui cum potus ægro porrigitur, cito post pulveris exhibitionem, frequenter occurrit.

Antimonii præparata a quibusdam præferuntur quia eorum effectus durabiliores sunt, alvum solutum tenent, et corporis superficiem eodem tempore relaxant.

Per stadium sudoris lodices removendi sunt, et inter toralia lanea ut effectus harum medecinarum magis promoveantur; æger ponendus est, atque linteis bene siccatis pout opus visum, suppleri debet.

Semicupium hora somni, aut fotus calidi extremitatatibus, aut partibus affectis admoti, ~~summe~~ summe proficere pronunciant, quocunque medi-

camento sudorem ciente promisso: verentalem
enti fines sudationi sunt, ultra quos si continue
tur, nulla fere praestat commoda, sed contra, cu
tem relaxat, et aegrum postea frigori magis ob.
noxium reddit. — Hoc evitare ad cubiculum
calidum sese recipere, et prope cutem vestibus
laneis se induere, aegrum decet.
Colchicum autumnale, Rhododendron Chry-
santhum, Conium, Hyoscyamus et Belladonna
in hujus morbi tractatione ~~multe laudati sunt.~~ commendata
ac remedia potentes laudati sunt.
Datura Stramonium magna in hujus morbi
~~tractatione~~ curatione utilitatis, praecipue in formam
acutam inventus est.
Plura mihi de scribere placet, sed tempus mihi
deficit — Finem.

An Inaugural Dissertation

on Hepatetis.

by Adam Clendenin of Maryland

Submitted to the examination of the Provost Trustees and Medical Faculty of the University of Maryland for the Degree of

Doctor of Medicine

on April 6th 1829

John B Davidge M D

Professor of Anatomy in the

University of Maryland

Sir

The Chair you have so long and ably filled in this University and the rank you hold in society, as an eminent Physician together with your uniformly kind and honorable conduct towards me. deeply impress me with a sense of the obligations I owe to you. and as a slight tribute of respect I take the liberty of Dedicating to you my Inaugural Essay

I am with Respt

your very Obt &

Humble Servt

A Clendinin

It is unnecessary for me to make any apology for my undertaking as the ~~rules~~ laws of this Institution make it ~~necessary~~ requisite for me to give my ideas on some Medical subject, and relying on your Lenity without farther prelude I submit it to your inspection

The subject I have chosen for my inaugural dissertation is a frequent occurrence and there is no disease I believe in the whole range of nosology with which the Practitioner is more frequently called to contend and about which there is a greater difference of opinion as it respects a proper Medical treatment, and in consequence of which there is a greater degree of empiricism practised in this disease than most others there is no organ in the body whose functions are so easily disturbed as the liver and I believe there is few diseases to which the human frame is subject, but if permitted to run on for any length of time will involve the liver in its diseased action, Therefore believing that the liver is a much more frequent seat of disease than is generally known or ever suspected in any climate - and that it manifests a greater variety of symptoms in its various grades of diseased action than all other parts of the human body together many of which are well calculated to mislead the Practitioner by conducting him to an incorrect pathological

conclusion, I will in a brief and desultory way offer a few remarks on that variety of disease which most frequently comes under our notice and especially that which occurs oftener in temperate climates called Hepatetis derived from two Greek words Hepar and Etis, when we Examin the size of the Liver in the fœtal state as well in the Adult and examen the singularity of its circulation compared with other organs of the body its great and extensive vascular connections - the functions it is intended to perform and on the due performance of which rests so much and in so great a degree the perfect health of the body we are at once compelled to admit that it is destined to hold a commanding influence over every other part of the human System and that when it is out of order discord and the want of harmony attend upon every other operation of the System so it is usual for medical writers in treating of affections of the liver and more especially of Hepatetis to divide it into two

Stages acute and Chronic. and as I purpose in this essay to treat of the former I Shall as usual proceed to notice the Symptoms with which like all other inflamations Hepatetis makes its attack, ~~more or less~~ commonly The particular Symptoms are a complaining of a tightness about the praecordia accompanied with a degree of anxiety and fever for sometime before the Symptoms peculiar to the complaint shew themselves, at other times the pain in the region of the liver being among the first Symptoms, In either case the accession is frequently attended with some degree of cold shivering a symptom not usually noticed by Medical writers altho generally attendant on Hepatetis both acute and Chronic is a heat or scalding in making water which according to the learned Author Dr Johnson who has written in a very ably and masterly style upon Hepatic diseases generally, supposes this to be occasioned by the passage of the bile along the [redacted] Urinary Canal,

The common diagnostic symptoms of this complaint are the seat and the kind of pains which attend it the acute Hepatetis is almost always attended with a pain in the right Hypochondrium which is sometimes shooting accompanied with a sense of tension in the part in some cases it is constant and severe in others deep seated and obtuse, the pain is not confined to the region of the liver it extends to the breast Clavicle and shoulder of the right side and in the last it is often more acute then in the seat of the disease The pain of the Hypochondrium is often increased upon pressure especially when the position of the body is such as to relax the abdominal muscles, as it is important to ascertain inflamation of the liver from the surrounding organs ~~the~~ as it regards the treatment more especially as Glandular structure you may generaly observe that a gradual insperation will not augment the pain of Hepatic as it does of Pulmonic inflamation while in Hepatetis tenderness on pressure under

the margin of the floating ribs will be much more sensibly felt and it may also be remarked that whereas the cough is at least coeval with the pain in pneumonia it generally succeeds it in Hepatetes from inflamation of the Stomach this disease may in most instances be distinguished by the observance of that gastric irratability and sensibility which renders gastritis so dangerous and distressing a complaint, the febrile symptoms too in Hepatetes having nothing of that low or typhoid type attending gastric inflamation, from spasm of the biliary ducts occasioned by calculi hepatica inflamation may be readily distinguished by the strong febrile excitement and many other circumstances especially at the beginning spasm will often terminate in or rather occasion hepatic inflamation and the treatment must be the same as in original hepatetes, the state of the bowels enables us to judge of the presence of the disease for in almost all inflametory diseases of the liver and in particular

of its glandular structure the bowles are either constipated or in a state of dysenteric irritation while the appearance of the faeces and urine will always indicate a greater derangement of the biliary secretion than inflamation of any contiguous viscera. An other circumstance unnoticed by authors is the state of the mind in Hepatic inflamation both acute and chronic which is much more perturbed than in any species of inflamation excepting the brain itself; this probably results partly from the sympathy which is observed between the head and liver or according to some authors from the suspension or derangement of the biliary secretion which is supposed to exert a peculiar influence on the mental faculties, Dr Cullen supposes acute Hepatites always to be an affection of the external membrane of the liver and that the parenchymatous inflamation is of the chronic kind. Hepatites is generally attended with a strong and hard pulse. though the pulse is sometimes small and feeble the pain is most severe when the patient lies on the left side sometimes tho rarely when on the right side, it is attended

with hiccup and a short dry and frequent Cough. when abscess is about to be or is already formed these symptoms with difficulty of breathing are sometimes mistaken for Pneumonia The symptoms above mentioned are considered unfavorable ~~with~~ a copious flow of high colored urin depositing a red or whitish sediment is a favorable symptom particularly if it appears before the disease has progressed far; according to Cullen this disease is cured sometimes by erysepelas making its appearance on some external part — resolution is the only termination of Hepatetis which can be regarded as favourable altho suppuration is upon the whole less fatal than in most other vescecular inflamations when abscess has formed there will be a sense of weight in the heart with throbbing pains occasional flushings of the Countenance night sweats and other marks of hectic fever. adhesions sometimes form between the liver and the walls of the abdomen and the matter is discharged by an external opening the matter sometimes bursts into the Cavity of the abdomen bringing on peritonael inflamation

which quickly proves fatal it is not uncommon for abscess of the liver to form a communication with the cavity of the thorax by erosion of the diaphragm pus will be discharged through the bronchia but the patient seldom recovers very frequently hydatids are found in the abscess and greatly increase the danger of the disease I will briefly notice a few of the causes of this disease which are the same as those of other inflamations amongst the first are living in hot Climates indulging in spirituous liquors and other external causes such as violent exercises derrangements of the digestive organs the treatment of Hepatetis when it occurs in cold or temperate Climates and is an inflamation peculiar to the investing membrane are blood letting either generally or locally with fomentations and blisters saline purgatives are useful in small doses as I have mentioned my determination to speak only of the acute stage of this disease and having mentioned the most general remedies I will leave the subject for a more experienced pen Finis

To, Maxwell, McDowell, M.D.
Professor of Institutes in the Universi
of Maryland. This Dissertation is most
respectfully dedicated, in testimony of the
great esteem and regard of its author.

Whitfield W Holleman, - of Virgin

April 1829.

Etiology of Inflammation

There is hardly any subject of greater practical utility either to the surgeon or physician than those much-prevailing affections, And notwithstanding this like fever has engaged the attention of that parte of the Medical profession who were remarkable for their talents & vigilence in the investigation of diseases, from the earliest dawn of Medical literature or the remote period of Hypocrates, the father of medicine, to the days of Harvy the discoverer of the circulation of the blood, & from which the most sanguine anticipations were realized; up to the more recent discoveries of Copland & other physicians of London, (see Medical Repository of London for May 1922) who by their profound knowledge of physiology & experiments have made a nearer approach to the truth than any, of the preceding ages.

Our obituaries notwithstanding are perpetually blazoning forth with the victims of its prey, through every country and nation that history records. Now the question arises what is the reason of this devastation? One might say that it is to be attributed to its desperate nature, or the ignorant might say, that it is owing to the fault of the physician, — but he can shield himself from this by saying, though it has thus proved destructive neither pains nor talents have been spared in its investigation. —

When we turn over the many pages that have been published on this subject, and see the almost endless variety of opinions that have and are still existing on this subject; that too from men — that hold the foremost rank as votaries to the cultivation of Medical science, that it would be repugnant to Common sense for me to attempt

at this early period to give entire satisfaction, May,
even after the most judicious selection from authors,
by one who is the most discriminating & impartial—
I say impartial for we have witnessed the baneful ef-
fects of this vice amongst preceptors and pupils)
with his own knowledge, all predicated on the most
extensive experience and research, the question could
not be put at rest. Then from the intricacy
of its nature and from the strong habitual
associations that are to be broken before the obsc-
urities can be removed, I despair of doing any thing
more than giving those opinions that will be prepared
from authors, with justice to myself, and then so
far as my presumption shall cause me to judge,
accompanied with what few suggestions my super-
ficial knowledge can give.

Inflammation and Inflamma-tory affections
are liable to occur in any part of the body where

ere are nerves and bloodvessels situated, and consequent-
there are no parts that are excempt from it ex-
pting the hair and cuticle. Some parts are
ore liable to inflammation than others, owing
their protection, organization, peculiar position, &c.
As regards the pathognomonick symptoms, they
e all liable to fail, and as they stand prominent
this subject they must be taken into consideration, giv-
hen they do exist the reason of it and as I shall
ttemp to do when I come to the proximate causes.
But I will merely observe here that when they are
present and they must always be, cannot be too high-
y estimated, are the only sure guides to a success-
ful practice. —

The kinds of inflammation that are
liable to attact the human body are numerous, as
well as diffrent degrees of the same kind or species;
owing to the exciting cause, the structure of the part,

the condition of the system, the season of the year, climate & some other contingences. —

Those inflammations have names given to them from the part in which they are situated, from the cause that produced them, from their extent and duration. But as each of them would require a chapter of considerable length just to give a description of their appearences & porticulars; it cannot be resorted to here, And besides, it would be a digression from the present subject.

I shall then in the present Dipertation confine myself to this subject, in the manner that it generally presents itself to those, who make it a matter of discussion. And first, Causation which according to the Old nomenclature seems to divide itself into three parts Viz. - Predisposing, Exciting and Proximate. The latter is the very summum bonum of so much contrariety of Opinion, & the one

that seems to have put at defiance every attemp
to elucidate it — I shall speak of the
predisposing and exciting causes first, followed
with some remarks on the propriety of such epithets.
Those two are so well defined by almost every popu-
lar author of the present age that it is not worth-
while to dwell long here, and therefore I shall be as
concise as possible; but it is to be borne in mind
that they lead to important principals in practice.
Predisposing causes are divided into hereditary
and Acquired. Some peoples constitutions are
more liable to disease than others, not from impru-
dence on the part of the individual after birth,
but a transmission from parents to their offsprings;
some peculiority so as to render them more suscep-
tible to certain diseases than others. And this we term — here-
ditary predisposition.

The epithet acquired predisposition is applicable

to those whose constitutions are not like the former, at first, but rendered so by their imprudence, or exposure 146
Both of those epithets are of advantage, and should not be expunged from our vocabulary of Medicine.
These termes then only imply a different degrees of liability to disease, viz we are originally so constituted by nature, as to be subject to disease & when there is more of this in one individual than another and this implanted on such a person from their parents, we call this hereditary and are well understood, whilst if this susceptibility is formed afterwards, it is acquired.
But some may say that they cannot produce a disease within themselves and therefore cannot be correct. I think they might as well say that those causes termed excitents would produce diseases on our bodies alike, that we should all have the same diseases no matter ~~what~~ what was our ~~occupation~~ constitutions, that they would without hesitation or choice seize upon the multitude

t large without distinction, but happily for mankind
his is not so. If a number of persons be exposed
inclement weather, only one or two persons may
ceive disease, and why? because the predisposition of
e ballence was not so great as those who become
diseased, and if they had, would have been all diseased;
nce we find it not only a cause, but a fertile one;
or as in this example the disease could not have
xisted, if it had not have been for the predisposition,
or would the predisposition have produced the disease,
f it had not have been for the excitent, &c.

Can any person say then with propriety that pre-
disposition is not a cause of disease? when it is admited
y every person of sound sense that no effect can be
roduced without a cause; then — I have just shown
that there is an effect, and that the effect would have
ot been produced if it had not have been for predisposi-
ion equally as much as the excitent if not more. I —

magine that this short sketch will settle the question
as well as a thousand words. And besides more reasons
are not to be apigned than are both necessary & true
prove known and acknowledged phenomena & it is
equally true that enough should be apigned, and
which, it is proved, there are not enough, that are true and sufficient
help we bring in predisposition — as a cause: —

Those terms are of great advantage in the conveying
our ideas, the thing for which language was inten-
ted, and therefore, is to be retained ... This dis-
position of the body must be recollected, for we are to prevent
as well as to Cure disease, called Prophylactics or
Conservation of health.

Predisposition has something to do with inflamma-
tion, for it exists often where it would not, if it was
not owing to predisposition. [redacted]

Inflammatory affections are so often influenced
by every thing that produces them there is no little

difficulty in ascertaining the predisposition or diathesis phlogistica at all times.

There are three states of the system however that may be said to constitute predisposition, viz. Irritable, atonic, entonic, and as expressive of pathological principals are not objectionable, but they are not of much practical utility for all common inflammations are to be treated on the same general principals, viz instead of giving stimulants as one would infer from some of our celebrated theorist thinking it to be a disease of debility we give a treatment to prevent diorganization or destruction of the parts knowing, as Richerand and Copland, have said, it to depend on an increased vitality of the parts.

Dr Cullen says the inflammatory diathesis appears most commonly in persons of the most rigid fibre, but I immagin from his obser-

vations (for I have the original text before my
eyes) that he looked for not much else as this
would do to prove his favourite doctrine of spasm
and which we shall have cause to mention when
we come to the proximate cause; but will merely
observe here that notwithstanding all of Dr Cullens
splendid Genious made some of the most palpa-
ble mistakes through the whole of his work that
his chapter of inflammation abounds with them.
I shall not enter into a detail of all the obser-
vations of this unjustly celebrated author on his
chapter of inflammation for doubtless the
most superficial observer of his work puts this
assertion at the most remote distance beyond a

successful contradiction

Dr Cullen on proximate causes further observes that
when the application of such stimulants (meaning the
exciting causes) are evident we seek for no other cause

of inflammation; and then when he comes to remote
causes enumerates the exciting as the remote causes
of inflammation, as much as to say exciting cau-
ses are not only proximate but remote & vice versa
Predisposition may be said to exist in persons
of plethoric habit, but the system that is below par
is enervated from sickness, anxiety of mind, much
bodily fatigue, or any other preternatural occurrence,
taking place in the system, pedestrian exercise &c
are liable to be effected by these affections. —
When the body is much weakened from previous
disease, it is liable to inflammation of the most
acute kind. — The system that is nei-
ther too plethoric, or much shattered from disease,
free from any constitutional affection, and
not very irritable are the most exempt from
these diseases. This bad habit of certain in-
dividuals has been witnessed almost by every person

but more by the Surgeon than others. And to his regret; for while he may amputate a thigh in one person with the greatest success he will see another pining under the severest symptoms from the most insignificant splinter which has peradventure introduced itself in the flesh. &c

The appellation Remote Cause has been in long use in our best portrayes of disease some doubting its correctness and have not substituted it, others saying nothing about its correctness. The word remote like every other in the english language is to facilitate the expression of our ideas and should not be considered as obsolete until that meaning is lost This then stands in the account and must be taken into consideration. Notwithstanding some have manifested a disposition to tare down they have not to build up & so soon as they do & succeed I will be one amongst the first to

sanction their position. But let us exam-
ine its claims. And first it is conceded on all sides
that there are many links in the morbid chain of
causation all having their peculiarities, and
instead of curtailing our language. We do not
hardly find terms to convey our meaning; May,
we often see men of the first erudition seaching
in vain for terms to convey their meaning that
are reluctantly compelled to return & use them that
may appear a little defective rather than grumble
them all together or resort to simplification which
has been the bane of Medical acquirement or pro-
ficiencies. It was this which caused Brown to
infuse and imbue the minds of those who chose to
be his followers with that poison that like the
conquers sword has slain its thousands and ren-
dered him accountable for the lives which were
prematurely the victims of his creed

Rush and Chapman of our own country have rendered themselves unpopular by an excessive fondness for sweeping away the greatest intricacies unanalyzed. The parts of Chapmans theory that was so absurd was successfully refuted at its very birth, and that of Rush was gradually falling even before the death of its illustrious author. I have only made those remarks which have been in substance reiterated again and again, to show the caution I think that is necessary not only in the rejection but in the choosing of terms & principals: not that I think there is so much importance attached to this subject, but that I do say what is worth learning atall is worth learning well. This term is to be used not only because it is preferable, but because it cannot be substituted in the sense that I shall use it I must correctly; for infancy is before old age and

the embryon before either, like the epic poems of the ancients a middle a beginning and an end.

Notwithstanding the step which some of our modern authors put upon this subject they leave it in entire Confusion. But I shall not follow them and only make a few remarks on Mr. Cooper's observations on causes, in his valuable chapter on inflammation; whose authority is as good as any perhaps of the present day.

And first Mr. Cooper says "the epithet remote is badly chosen; for it comprehends many things which contribute immediately, as well as remotely to inflammation." See then the inconsistency of him. He not only contradicts himself like Cullen and as I shall soon show but seems to forget the purpose for which remote causes were intended, as well as that an exception to a rule destroys it. When we know that a

rule without an exception would be no rule at all

As examples are good for illustrations, says an eminent author, I will mention one and be as concise as possible. ——

Most medicines operate diffently owing to every thing or a parte that is concerned in the operation, and this does not alter the meer name (Botanical or technicle) but only serves to give classification according to their several effects produced, and so it is with the diffent causes that are scatter for and wide around us and is busy in the production of disease, they operate diffently at diffent times as all admit and that this ought not to alter their names given according to their diffent effects produced any more than a medicine called an emetic (founded on the same principals) and operates as such at one time suffers its name to be altered by acting as a diaphoretich or

cathartic at another. This is saying that the same thing may operate diffently (See Cooper, p11) but this does not destroy its meaning upon the strictest principals of our theological nomenclature. Mr Cooper contradicts himself by saying, in the exception that I have just copied" that there are many remote as well as immediate (meaning exciting) in the production of inflammation and proceeds to give the cases of Professor Thompson of Edinburgh as illustrative of the fact of their action in the production of inflammation. Then he says the exciting cause which is sometimes used is more correct than the term remote cause. I have thus criticised upon Mr Cooper because I think him to be as correct as the most of physicians and like him a like fate awaits their unfounded beliefs.

The Exciting Causes of inflammation are numerous-they May act Mechanically or Chemically and are generally referable to accidents &c

They are so numerous that it would be superfelous to mention them And therefore suffice it to say, heat too concentrated, inferor temperature, bits of glass, thorns, &c &c. Metastasis often produces inflammation as is seen in Rheumatism, Gout, Mumps, inflammation of the brain which succeeds erysipelatus of the face, Opthalmia which succeeds gonnorhoea; it is probable in the latter case that the individual gets his fingers imbued with the virus and by direct application to this delicate organ produces inflammation.

Persons should be extremly careful after a spell of sickness not to expose themselves too much for then it is that they are most apt to have inflammatory affection, and those of the most vital organs &c

Proximate cause of Inflammation is
the last link in the morbid chain of causation
in that cannot be absent, and intervenes between
the disease, and the first impulse given to the morbid
phenomena, by the excitent. It may be termed that
condition of the Nerves and blood-vessles which is
thus present, and essential to its existance.

This state of the inflamed part, or partes, seems to
have excited great mistrust, amongst the members
of the Medical profession, of late; and notwithstanding,
the sagacity of those dexterous physiologist and anato-
mist, the subject is yet unsettled, some saying that
it is debility, and others tonicity, or increased vitality of
the partes, that are chiefly concerned in the morbid
action. When we take a view of those capil-
laries to which it is chiefly confined, and see the veil
that natures perfect hand has thrown on, and
around them — with what exquisit minuteness and impa

Called perfection she accomplishes the mechanism of parts, destined for such important ends in the animal economy, it is not astonishing why they should fail. For instead of thus considering it as endowed with action, under the government and controle of vitality (proved, from the many plexuses of the nerves of organic life which are seen in the greatest abundance as far as the eye can go), they have disgustingly denyed the perfect, and sufficient power of those principals, and compared the vital channels, to hydraulick machines, - pipes to forcing pumps, and rivers.

Then as vitality is only known by its effects, we are not astonished why so many should have failed in the true investigation of this subject; and given those multifarious discrepences, that fill the pages of our best authors, both of ancient, and modern date. &c

Those who contended for the inspissation or lentor of the blood, as the proximate cause of inflammation derived

their belief, principally, from the appearance that the blood put on after standing a while, in inflammatory diseases. But this opinion was confined to the more obscure ages of Medicine, when Chemistry and Physiology was but imperfectly taught as sciences, and the best works on Medicine was, nearly altogether, empirical. But those sciences, by their rapid march, to their present perfection, has dispipated those hallucinations, handed down from the progenital age; ——— The buffy coate of the blood, in inflammation, is only an effect and not a cause of disease. The blood is so altered, as I shall presently mention, by disease, as to suffer the proximate parts to seperate with greater facility than in health. Not that the blood has received any acid substance as spoken of by Boharave and his followers, or by Galen, but has a departure from health more compatable with that important office that

this fluid is destined to perform in the animal economy. The inflammatory surface may be present or absent; if the blood is so situated as for it to coagulate soon, this coat will be absent and if not it will generally be present. Mr Cooper states two cases from Dr Hean & Dr Parry in which there was this buffy coat, and still there was not the least vestage of inflammation. Then it is not to be take always as a sure guide; but when present may be accounted for in the following manner. The vitality of the blood is increased and it prevents its quick coagulation, when drawn from the system labouring under inflammation, and thus suffers the colouring substance to gravitate and leave the fibrine & buffy coat, or Crasimentum of the blood. Inflammation, is then, to be considered as an augmentation of vital action, See Richerand p 35 also Dr Copland's opinion of London in the, medical Repo-

ritory 1822 these will place the subject upon more satisfactory grounds than any preceeding production. The capillary system of bloodveples are nearly, if not entire from under the influence of the heart, and under the ganglionic system of nerves, and when these nerves are provoked by the exciting cause, every action under their government must be preternatually increased, so as to produce that increased action that we see in inflammation. The nerves then are as so many sentinels for the protection of those delicate organs and rather than yeald to the ravages of disease ~~from~~ from the first, or suffering nature to be overpower, ~~from the~~ first at the first application of the offence & death to ensue, they are instinctively led to know they are placed between to alternatives and makes an effort sooted to the occasion to ward of the fatal catastrophe by contending for their rights, and thus puts on the features of inflammation. Now those who content against this

medical force of Nature say, that she would not ~~thus~~ y
to such violent means to rid herself of an invading f
as if ~~the~~ effect could be produced without a cause a
action, which I have never seen nor do I imagine th
any other person ~~ever~~ did, except, those who
contends against the very Medicatrix Natura or
the vital influence of the nerves of organic life.
We have several instances on record of contagious matte
seizing on the system, and no reaction taking place
this is ~~the~~ followed by death very soon; but if rea
tion takes place it augures favourably. Then we find
that Natures force has a salutary effect, and will
contend against disease if her antagonist is not lon
powerful as in the first of the above examples. &c
The other system of Nerves have not the capillaries, only in
directly under their government, and hence in the dolorous
there is but slight reaction. Coupland, Richerand, and others
say that their is much contractility & sensibility in those small
tubes and that life must be more active, in them; for th
motion given to the blood by the heart being exhausted by
this fluid is not longer in the sphere of its action, can
circulate, but, from the influence of those vessels the
selves. See Bichat, Hunter & almost every respectable author.
Having thus finished hastely, I remain sensible of the imperfections here contain

An Inaugural Dissertation

on Erysipelas,

Submitted to the examination of the

Provost, Regents, and Medical Faculty of the

University of Maryland for the degree

of Doctor of Medicine, by

Robert Ferguson of Maryland

April 6th 1829

To

John B. Davidge A. M. M. D

Professor of Anatomy in the University

of Maryland; This essay is respectfully dedicated

as a small tribute of the high esteem and

respect of the author

In selecting a subject upon which to write an inaugural essay, to be submitted to the inspection, of so learned, and honourable a body, as that of the Medical Faculty attached to the University of Maryland; I cannot but feel that embarrassment which must always grow out of a consciousness of ones own inability to produce any thing worthy the attention of those by whom it may be perused: but a consolation truely gratifying in thus submitting my

my first production, is a knowledge of its falling into the hands of those, from whom I have heretofore always been accustomed to receive such manifestations of of feeling, as are calculated rather to encourage than to embarrass—

The peculiar situation of one compelled at this enlightened period of the Medical profession, to write an essay which has for its theme something in reference to medicine, must be apparent to every man ateal acquainted with the science—

For it is a fact that there is scarcely a subject in medicine, that has not long since been exhausted by those who were desirous of gaining a reputation for the

profession, simply by the promulgation of facts, and useful discoveries: but it is nevertheless true, that in later times there have been too many, who desirous of promoting their own interest, rather than benefitting the profession; have been led away by the false belief, that fanciful ideas clothed in fine language were all that were necessary to establish whatever they might suject in opposition to the better judgement, and sound, but plain reasoning of those who preceded them —

The mistaken notion of those men however who were wont to believe that the only avenue by which to arrive at distinction or eminence in the profession, was

either to set forth to the world something
in opposition to well established principles
or else to claim some discovery, ~~to which~~
to which they had no title, purporting to
be invaluable for its practical utility; is
I am willing to admit Abandoned by most
Medical men of the present day—
But since it is a curse entailed upon the
Human family, that no one shall travel
a smoothe and unmolested path through
this animal world: so the Medical Philos
opher is compelled to encounter his propor
tion of the evils which mankind are
subject to— Thus we are men equal both
as regards moral, and intellectual attain
ments, differing upon points which it would

seem of no great moment to determine:
it is not however to this class, that I allude
when I say the Medical Philosopher can
not pursue his course unmolested: but
to those who either for pecuniary con
siderations, or with a hope or expectation
of detracting from their superior, by which they may
perhaps exalt themselves; attack basely
in the dark, his high and justly acqui
red reputation — Such miscreants I fear
will ever continue to infest that path
which has been allotted the Medical Man
of honour and distinction to travel —

I have selected Erysipelas as the
subject of this essay; not that I expect
to say any thing new in reference to it;
but with the intention of endeavouring

to point out as far as I shall be able, the best and most generally received opinions as regards its causes, Symptoms, and treatment And should I chance to err in thus endeavouring to select from among the many; those opinions which I conceive to be most correct on this subject: I hope I shall be held excusable; at least when my inexperience is taken into consideration— I shall be under the necessity here of confining myself to the true and idiopathic erysipelas; as my limited time will not permit me to enter into an examination of all its varieties, as laid down by Authors- But in as much as these varieties are so very differently given by different writers; by many of whom they are multiplied

I conceive most unnecessarily; I should did my time even admit, consider it fruitless to attempt an enumeration of their many and various hypotheses—

Dr. Cullen makes even the herpes Zoster or shingles a variety of this disease; but this is strangely to confuse simple cutaneous diseases with idiopathic fevers— For that erysipelas is an idiopathic disease depen dant upon ~~a specific~~ specific causes is now I believe generally admitted by most enlightened men of the profession — The confusion which has been exhibited by many of those who have attempted a discription of this dis ease; has been noticed no doubt by all those who have paid any attention to it; but that it should be entitled to a

minute, and discriminative attention needs no proof—

Erythema is that genus of inflammatory affections with which this disease has most generally been compounded; so much has this been the case indeed, that various writers have used the terms erysipelas and erythema indiscriminately; on account I suppose of the latter in one or two of its species being said to accompany erysipelas, but of which it is then a mere symptom. Frequently however as these two disorders have been compounded from an indiscriminate application of the same name to both; it will not I think be difficult to draw a distinctive line between them and the best, and most clear which I

of erysipelas to small pox as respects con
tagion — It is a fact I am aware that
this opinion has many and able supporters
ters at the present day; but it is also
true that there are many who entertain
a contrary belief — It only remains then
for every man to determine for himself
which of the two opinions is correct —
And as I have seen many of the varieties
of this disease during my residence in the
Baltimore Alms House; in no one instance
of which was it propigated from one in
dividual to another: although no discrim
ination was ever made, as regards the remo
val of the patient labouring under the dis
ease, from among the large number that
are constantly in the same apartment;

I will ever believe that there is nothing of a contagious nature about it, until I shall see something further to change my opinion — And I am inclined to think it most probable, that those who entertain the idea, that this disease is or has at any time been propigable from one person to another by contagion; have been led astray by being placed in situations where they might have been persons of that peculiar diathesis, as being endowed with a susceptibility of the disease; brought under the influence of the same causes, that might have produced it in those from whom they were supposed to have contracted it — And this I think is the more probable since it is said sometimes to originate

from a peculiar condition of the atmos
phere; what this condition is however is
not yet known, and I fear will ever
continue to remain in obscurity—
The causes of erysipelas are not very well
understood— There is no doubt in some
persons a peculiar diathesis as I before
observed, which renders them particularly
liable to this disease, and in them it
is brought on by very trifling causes—
This disposition to the frequent attacks
of the disease, is considered by some to be
hereditary, and has been accounted for, by
some peculiar organization of skin; and
this is also attempted to be given as a rea
son for its greater prevalence among
Females— Of these vague speculations

I shall say nothing, except that they serve to exhibit the fertile imagination of their Author— It is a fact however admitted by all, that while erysipelas sometimes attacks the robust, and plethoric; it is upon the whole much more comonly met with, among those who have been debilitated; either by previous disease, long residence in a hot climate, unwholesome diet, or bad air: but why females should be more comonly attacked by it than males; I am at a loss to determine unless it be, because they are naturally of a more delicate habit than the other sex

Erysipelas may occur at any age— There is a species of it which is said to attack new born infants; particularly in lying in

Hospitals, and work Houses; but it is chiefly the disease of adult life, and of old age — The occasional, or exciting causes are; alternations of temperature generally from a higher to a lower degree intemperance, suppressed perspiration, and all the common excitations of fever operating upon this peculiar diathesis, and producing efflorescence in conjunction with the febrile attack — It is said to have occured in consequence of repelled gout, suppressed menstruation and exposure of the head to the midday rays of the Summer Sun — And also sometimes to have been produced by indigestible, or rancid foods; and especially by shell fish which disagree with the stomach

I am inclined to think however, that in many cases of this kind, there is reason to believe; erysipelas has been mistaken for urticaria or roseola — Having thus briefly taken notice of some of the more prominent ~~sym~~ ~~toms~~ causes of idiopathic erysipelas; it follows next in order to say something more particularly respecting its symtoms —

The local disease may commence on any part of the skin: but one side of the face or some one of the extremities are the parts upon which it most usually makes its appearance — When the face is the seat of the disease, there is said to be more danger attending it, than when the extremities are affected — In the former case it is generally preceded by coldness and shivering

which alternate with irregular flushes, and other symptoms of pyrexy— Dull aching pains are felt in the head neck and back; to which succedes febrile symptoms of considerable severity, which generally continue throughout the whole course of the disease— The pulse is always frequent, and sometimes full and hard— The functions of the brain are much disturbed, and drowsiness or confusion of the head, amounting in some cases to delirium, not unfrequently accompany the hot stage of fever— The redness and swelling make their appearance on the second, or third day at furthest from the attack of rigour: though they are said sometimes to take place within, only a few hours after the attack—

The redness can be easily made to disappear when pressed upon by the finger; but returns as soon as the pressure is removed—

The eruption fixes itself, when the face is its victim, most generally on one side of the nose, or the cheek, temple or forehead is of a dark red colour, smooth, and soft, and attended with a sensation of heat and tingling— The redness and swelling, very soon begin to extend themselves over the affected side of the face, and spread in some instances to the scalp, and to the side of the neck or upper part of the breast— Hence the face will sometimes exhibit a most disfigured and almost appalling spectacle; the mouth being drawn to one side; the

eyelids so turgid that the eyes became completely closed, and the whole face and scalp enormously swollen—

On the fourth, and fifth days vesications arise on different parts of the diseased surface, especially about the centre; but with an increase rather than a diminution of fever—The fluid which is contained in these vesicles, is at first clear and watery; but afterwards becoming straw colour ed or opake—The cuticle often gives way and the fluid oozes out—About the eighth or ninth day, and sometimes sooner, the redness changes to a brown or yellowish hue; the vesicles subside, and the cuticle dries, and desquamates—The febrile symptoms do not however always cease with the subsidence of external inflammation when they do; they are said sometimes to

return suddenly with as much violence as at first, and continue for some days — In the progress of this disease, and more particularly towards the latter stages; the febrile symtoms are said to assume in many cases a well marked typhoid character; and great debility is said always to characterize the period of convalescence — The constitutional disturbance when the eruption shows itself on the extremities, is much less violent — The limbs most comonly affected are the legs, in which from their depending situation, the vesications are said to fill more rapidly, and break sometimes within twenty four hours from their first appearance The form of this disease described by Dr. Good under the name of the erratic variety, differs from the above only in its almost uniformly beginning in some part of the face; and

spreading in succession to the extremities, and in some instances extending even over the entire frame; the patch first formed rapidly healing, as new ones appear below — Another variety which Dr Cullen has termed erysipelas phlegmonodes, deserves here to be mentioned — It is applied to that form where the local inflammation has proceeded deeper than the skin, into the celular membrane, often suppurating, and sometimes occasioning mortification by which air is said to be let loose in the cells: and the effect is to produce a singular feel when examined: neither that of fluctuation, nor of crepitation but somewhat resembling both combined — This form of the disease is placed by Dr Good as a variety of his genus erythema: whether this be a correct classification, I shall not pretend to determine — But I must observe here, that the peculiar kind of matter which is formed in it, fills an easy passage

into the comon celular membrane, increasing the same kind of suppuration wherever it goes; and as mortification and consequently putrifaction are apt speedily to follow; the discharge will become very offensive — But as the parts loaded with this effusion seldom ulcerate, they should be opened early: for the fluid is said either to get into the celular membrane, from want of adhesion or seperates parts that are only attached; as the periosteum from the bone, or muscle from muscle. Whereas the true suppurative inflammation on the contrary, ulcerates briskly, and hence should be allowed to burst, or at least should not be opened early — The tendency in erysipelas to spread to some internal organ, is a circumstance in the history of the disease, of the utmost importance — It is the great source of danger in idiopathic erysipelas And regulates in no inconsiderable degree the treatment

Pleurisy or severe bronchial affections, have in some cases been observed: but the brain is the organ chiefly liable to be affected— With the above view of this disease, I shall be able to express the treatment in a few words— It has been supposed that the common principles, applicable to other inflammatory diseases, are also applicable here: but the supporters of this opinion, do not seem to have taken into consideration the variety of causes from which erysipelas is said to originate, and the most infinitely varied circumstances of situation, age, and condition under which it appears— It is scarcely necessary to observe here, that the symtoms are more moderate, the prognosis better, and consequently the remedial means required, less vigorous, the more external the seat of the inflammation: and in many cases it will be only necessary to regulate the diet, and administer one, or two gentle cathartics— The practice of bloodletting

is very generally abandoned by late writers on this disease but in the acute form, and particularly when some internal organ is involved; I conceive it to be indispensable; but to be regulated altogether by the pulse — When however the disease puts on a less decided inflammatory character, the chief reliance is to be placed on the exhibition of purgatives; particularly those of the saline class, as they are said to have a very remarkable influence over this species of inflammation and therefore merit a preference in every form in which it manifests itself — Diaphoretics should also be given, and those of a non stimulating nature should be selected; such as the preparations of Antimony: Nitrous potash in combination with a little ipecacuanha &c — When the disease occurs in aged persons or in debilitated habits; attended by a feeble pulse, brown tongue, and a disposition to gangrene; the system should be supported in the beginning by bark & wine

giving at intervals the Spiritus Mindereri, and occasionally small doses of the Soluble Tartar — The thirst should be allayed by taking plentifully of ~~diluent~~ demulcent drinks — The local applications in this disease, have been as many and various as the general remedies; but those best suited best to remove the sensation of heat and irritation are those of a cooling nature; such as cold water, or vinegar and water; or what I have seen answer better; a little Ammonia combined with the vinegar and water; and sometimes a small portion of Alcohol — When the vesications ooze; Starch or what is better, equal portions of prepared chalk, and calamine well levigated, should be frequently dusted over them When there is any tendency to gangrene, stimulating lotions, and particularly such as contain camphor are said to prove beneficial —

An
Inaugural Dissertation on Hepatitis
For
the degree
of
Doctor of Medicine,
submitted
To the examination
of the
Medical Professors,
the
Rev: Bishop Kemp D.D. Provost;
And the Trustees
of the
University of Maryland,
On the 2nd day of April 1827.

By Caleb M'Cloud
of
Elkton Maryland.

To

Amos A. Evans M.D.

of

Elkton Maryland.

This essay is inscribed as a tribute of respect, for your medical talents, and of gratitude for the care with which you endeavoured to instil into my mind, just principles of medical science.

That you may long continue to merit the honours attached to your station, and that the happiness and prosperity of yourself and family, may con=tinually increase, is the unfeigned wish of

Your sincere friend and pupil

the Author.

To

Richard W. Hall M. D.

Professor of Obstetrics and diseases

of women and Children in

the

University of Maryland.

This essay is humbly inscribed as a public acknowl=
=edgment of the many obligations under which I
am laid to you for your polite attention and
many favours conferred upon me, during my at=
=tendence upon your invaluable course of Lectures.
that you may long continue to enjoy that health,
which you have so often and ably restored to
your fellows beings, is the fervent desire of

Your sincere friends

the Author.

To
the Medical Professors
of the
University of Maryland.

In consideration of the great intrinsic worth and high rank, to which their talents have raised them in the republic of Medicine, this Essay is most respectfully inscribed by their friend and pupil.

the Author.

Hepatitis.

There is no viscus in the human body more liable to derangements, functional and organic, than the Liver; and few whose circle of Sympathies are so numerous or important. In whatever light we view its functions, or whatever uses we attach to it; whether with some Physiologists we consider it a secretory, or with others an excretory organ, or with others as Dr Rush, performing both offices — serving not only to complete Chylification and seperate it from the excrementitious matter in the Intestines, but to animalize the chyle which has escaped the process of Vivification in the ~~Stomach~~ Lungs, we must admit that its diseases, particularly the one of which I am about to treat are obscure and dangerous.

Inflammation of the Liver is divided by systematic writers into Acute and Chronic; and for all practical purposes, this is perhaps the best division which could be made; as they require a somewhat different treatment, at least the remidies must be more promptly administered, and carried to a greater extent in the former than in the latter.

A pathological distinction has also been attempted in the seats of the inflammation.

Thus we are told, that when the inflammation is seated in the peritoneal covering the pain is more acute, the symptoms more aggravated and the constitutional derangement altogether more violent, than when the parenchymatous substance of the Liver is affected. The particular parts also, of that covering have their particular symptoms, If the convex surface of the Liver be the seat of the disease, the cough is more violent the disease more closely resembles pleurisy, and jaundice is a prominent symptom, from the contiguity of the diaphragm. On the other hand, if confined to the concave surface, say they, the pain is more obtuse, particularly on pressure, and it is attended with greater sickness of the stomach and jaundice.

Admit all this to be true, and of what practical utility is it?

But I contend that the disease is never so limited or confined in its seat, unless it be at the very commencement of the attack. Long before the inflammation has reached its acme, not only the peritoneal covering, but, the substance of the Liver itself, Vessels, Ducts, and every thing else, are more or less involved and not only the convex, but also the concave surface in most cases. If it could be proved that the con-

=ous seats of this disease, require different treatment
the distinctions might be insisted on; but I apprehend
, this will not be contended for by any one.
Is there on record any well attested case of this disease
where on dipection, the peritoneal covering was
found diseased, and the parenchymatous substance
of this organ uninjured - or vice versa? If there
be, it has not come to my knowledge.
Morgagni, who has recorded a great many, found
I believe, evidence of disease having existed in
the substance of the liver, in every instance the peri
=toneal covering shewing also marks of previous disea
=se, such as adhesions, mottled appearances &c.
Reasoning from analogy we arrive at the same con=
=clusions: the pleura pulmonalis like the peritoneum
=um covering the liver, is a serous membrane,
yet, it would be difficult to find a case of death
from pleurisy recorded, in which the lungs at the
same time did not on dissection, exhibit marks
of disease.
<u>Acute Hepatitis</u> is characterised by a pain gener=
=ally severe, though sometimes dull, in the right
Hypochondrium, aggravated by pressure over the
part; the pain extends, generally to the right

shoulder and scapula, if the right lobe is affected but, to the left shoulder and scapula, if the left lobe be affected, by nervous sympathy, owing to the communication between the 3rd cervical and 8th pairs of Nerves. The patient is unable to lie on the left side, frequently lies with most ease on the side affected. the respiration is hurried, a dry cough attends, and the pain is increased by a deep inspiration. It is ushered in by a chill and succeeded by the usual symptoms of inflammatory fever, as a hot, dry skin, quick hard and tense pulse, great restlessness, delirium and nausea, the tongue is coated with a yellow or white fur, and is commonly dry, tho sometimes moist. sometimes there is a yellow or brown and dry stripe along its middle, the latter appearance however, does not generally occur untill the disease is farther advanced; the urine is high coloured and scanty. the bowels are mostly costive. sometimes a bilious diarrhea accompanies it and is generally favourable.

If the disease be not speedily arrested by copious depletion and other appropriate remedies, it soon passes on to the suppurative stage. which is

denoted by the pulse continuing full, frequent and jerking, with occasional chills and rigors, and an increased fullness of the right hypochondrium and hectic fever - finally, if it approach the surface, to which all abscesses have a strong tendency, fluctuation may be perceived between the 3d or 4th ribs, sometimes higher or lower according to circumstances. It may be discharged however into the cavity of the abdomen, and thereby produce certain death - or it may by adhasive inflammatory action discharge itself into the bronchiac vessels, for an interesting example of this termination, see the case of Doct Pascalis, recorded in Coxe's Medical Museum, Vol 1 p. 158. or it may be discharged into the intestines by the ductus Choledocus, or by adhasive inflammation between the liver and intestines, and most generally the Colon, more frequently hectic symptoms occur and the patient is worn down with all the symptoms of Phthisis pulmonalis.

Diagnosis.

Acute hepatitis may be distinguished from pleurisy, the disease which it most resembles, by the pain and soreness being increased on pressure, and by the seat of the pain being lower down than in the early stages of pleurisy.

It might be confounded with Rheumatism of the muscles if the other symptoms were not attended to; in both there is a soreness complained off when pressed, the rheumatic soreness however is aggravated by a much slighter pressure than hepatitis, but the chief distinction is the absence of the other symptoms. Rheumatism of the muscles is not so apt to commence with a chill, nor does the febrile symptoms run so high, the cough too is generally absent in Rheumatism; from a painfull attack of spasmodic cholic, it is distinguished, by the colour of the stools, and by having more febrile excitement than jaundice, the pain is less violent and more constant in hepatitis than in jaundice.

Prognosis.

From the importance to health of this viscus, and the difficulty of arresting the inflammation if called after the third day, together with the strong tendency which it always has in this climate, to run into suppuration, the prognosis in this disease must be guarded; the danger will be in proportion to the violence of the symptoms. A mitigation of the pain and fever, together with a more copious secretion of urine, with a free deposit of sediment, and the pulse becoming less frequent and softer, with a slight and

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genoral moisture on the skin, are favourable symptoms. Dark coloured urine has been considered a fatal symptom. Hiccup and delirium &c are unfavourable symptoms. Acute hepatitis may terminate in resolution, suppuration, schirrous, or gangrene; most generally in resolution or suppuration.

Causes.

The causes of hepatitis are those common to inflammation of other parts: such as, Exposure to sudden changes of temperature, fatigue and exposure to cold air when heated, passions of the mind, long continued hot weather, marsh miasma, neglected or protracted intermittents, hurts, falls, &c, but above all the inordinate use of ardent spirits. It was once remarked by Dr Rush "that the lightning rod did not more certainly attract the electric fluid, than debility invited disease". heat and marsh miasma therefore by overstimulating, produce an engorgement of the liver, and consequent inordenate secretion, but fortunately for the patient that bilious diarhea thus produced saves him from an attack of Hepatitis. in a great many cases.

Treatment.

The principal therapeutic agents in this disease

are Bloodletting, Cathartics, Epispastics, Sudorifics and Mercury. and 1st of

Bloodletting.

Nothing tends so powerfully to arest inflamation as the loss of blood, and in this disease perhaps, more than most others, requires to be taken with a liberal hand. No regard should be paid to the quantity drawn, but to its effects. The lancet should neva be sheathed untile the symptoms are relieved or the pulse begins to sink, in no other way can the sup=purative process be prevented. By lesening the quantity of circulating fluids, bleeding both gener=al and local contributes greatly to equalize the excitement, ally morbid action, and consequently promote resolution of the inflammation.

Cupping and leeches over the seat of disease, are excellent adjevants, but, cannot be relied on to the exclusion of other remedies. Next to Venesection in point of importance in this complaint, I come to the consideration of

Cathartics.

They tend to lesen the force of the inflammatory action, and in an especial manner to unload the engorgement of the Vena Portæ and branches-

they should be repeated every day. Calomel should not be given in the first or violent inflammatory stage. the best articles of this class we can use are the neutral salts, aided by injections. The vitiated bile must be purged off as fast as secreted. It was formerly the custom to purge altogether with Calomel, and to continue it until a salivation was induced, this practice is improper in a high degree and cannot be too strongly reprobated. Calomel is too powerful a stimulant to be useful in the stage of high excitement, and if persisted in must add fuel to the fire. Nor can a mercurial action be brought on until the morbid action of the system is reduced to what Dr Rush very aptly styles "the salivating point." If pushed before that time, the Mercury only serves to exhaust the powers of the system more rapidly, without superceeding the inflammatory action. When after active depletion, the inflammation runs into the Chronic form or state, and which it sometimes does, a ptyalism has a good effect, and may readily be induced, but should be kept up for a considerable length of time.

Next to purgatives in point of efficacy may be

ranked

Epispastics.

After the force of arterial action has been reduced by free bleeding and purging, Blisters applied over the region of the liver, tend greatly to relieve the inflammatory action, and promote resolution, applied before the action is sufficiently reduced by the proper remedies they tend to aggravate the disease.

For the purpose of producing vesication, various articles have been recommended, as Canthariades, Mustard, hot water, Nitric Acid diluted &c, of all these articles however, the Canthariades is the only one to be relied on, it appears to have a specific action possessed by no other article of this class.

It has been usual to dress the blistered surface with Ungt: Hyd: for the purpose of producing a more speedy salivation, and if the morbid action be previously reduced this practice may be pursued, but I think we have a much better method of using this remedy, but if the inflammatory action be not previously reduced, the remedy will invariably increase and aggravate all the symptoms. We should always endeavour by the proper remedies, and those carried to their full

extent to render the use of blisters unnecessary.

Diaphoretics.

Of all the articles of the Materia Medica none have a stronger tendency to overcome morbid action than those which restore suspended secretions, and particularly the healthy functions of the skin; for this purpose the different preparations of Antimony hold a conspicuous place. Of these preparations the Antimonium Tartarizatum, if the stomach be not too irritable to bear it, as is often the case, is the best. Rush's Antimonial powder, is particularly well adapted to produce these effects: from 10 to 15 grains Nitras Potassæ, from 1/6 to 1/10 of a grain of Tart: Antimony and from 1/4 to 1/2 grain of Calomel, repeated every two or four hours, not only keeps the bowels in a soluble state, but alters the morbid secretion of bile, and restores the healthy functions of the skin and kidneys. A combination of Spirits Nitri Dulcis and Antimonial Wine, is a very good remedy in the disease; the antiphlogistic regimen should be strictly enforced; the drinks should be of the most cooling kind, and very little nourishment of any kind allowed.

If an abcess should form and point outwardly, warm poultices should be applied, and the abcess opened as soon as the existence of pus can be ascertained to be present

An opening sufficiently large to allow of the escape of the matter will be all that is necessary. An incision 6 or 7 inches in length as recommended by some, (see a note in Lind on hot Climates,) is unnecessarily large, and calculated to do mischief by the too free admission of air to an extensive sac unaccustomed to its action. If hectic symptoms supervene after the opening of the abcess, and the strength fails, Tonics, as Bark or quinine and Nitric acid, and a more nourishing diet with a moderate allowance of wine, must be resorted to.

Chronic Hepatitis.

is indicated by a dull pain in the region of the liver, increased by pressure, pain in the back and shoulder, a sense of weight or dragging, uneasiness and difficulty of lying on the left side, together with a dry skin, slight fever, sallow countenance, yellow eyes, scanty and high coloured urine, furred and yellow tongue, and dyspepsia. The liver is generally enlarged, and can be felt distinctly projecting beyond the cartilages of the false ribs, the appetite is impaired, and the bowels mostly constipated, a dry tickling cough attends, and as the disease advances dropsy is produced, from an obstruction

to the free passage of the blood through the Vena Portarum and Vena Cava inferior, or hectic fever and jaundice come on and destroy the patient.

Causes.

It is sometimes produced by the acute disease, but more frequently by intemperance, high living, and the miasma of warm climates; the neglect of depletion, and improper and premature use of Tonics in the treatment of our intermittent and remittent bilious fevers, is a fruitful source of the disease.

Treatment.

I believe that all chronic affections of the Liver, whether enlargement, induration, Dischronia, tubercles, or Hydatids, are the products of inflammation, and that whilst either of them exists, chronic inflammation is very likely to exist at the same time.

Chronic inflammation requires chronic bleedings but, instead of pounds, ounces of blood will answer; a strong proof of the propriety of this practice, is the fact, that these diseases are often, at least sometimes, cured by hemorrhages artificialy induced; local bleeding ~~by~~ by leeches and cupping is more decidedly beneficial in this disease than in the acute form.

Purging is a powerfull remedial agent in chronic hepatitis, but the evacuations should neither be so large or so ~~frequ~~ frequent, as in the acute form they must however be presisted in for a longer time; Calomel is one of the best articles for this purpose. Mercury has time out of mind been considered almost a specific in chronic hepatitis, in fact, the cure cannot well be completed without it. A slight ptyalism only is necessary, and should be kept up for sometime, the strength of the patient being at the same time, properly supported by light bitters and nourishment if the accompanying debility demands it. The blue pill together with mercurial friction over the Hypochondriac is in this, as most other cases, where salivation is necessary, the best mode of inducing it.

Blisters are here as in the latter stage of the acute form, of much advantage, to be serviceable they should be frequently repeated.

The Nitro muriatic acid bath has been highly spoken off in this form of the disease, whether it will continue to maintain its reputation time only can determine, its utility is in my opinion doubtfull. In scorbutic and scrophulous

habits the Nitric acid may claim an advantage over Mercury. Being a powerfull Tonic and stimulant it should be used with caution, in the early stage even of the chronic form of the disease, generally speaking its use should be preceded by bleeding, purging and blisters, if much heat of skin exists, Sudorifics conjoined with the other treatment, will be found serviceable.

If much nausea and want of appetite accompany a furred and yellow tongue, a gentle Emetic of Ipecacuanha will be of service.

Bleeding if necessary should always precede the Emetic. Removal to a cold or uniform climate and a healthy atmosphere is often required to complete the cure.